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LECTURES BY M. DE BLAINVILLE ON COMPARATIVE OSTEOLOGY.

THE

COMPARATIVE OSTEOGRAPHY

OF THE

SKELETON AND DENTAR SYSTEM

IN THE FIVE CLASSES OF

VERTEBRAL ANIMALS,

RECENT AND FOSSIL.

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WITH GRAPHIC DELINEATIONS BY M. WERNER;

EDITED (FROM THE FRENCH) AND

ADDITIONALLY ILLUSTRATED

WITH NUMEROUS NOTES, OBSERVATIONS,

AND DRAWINGS,

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OSTEOGRAPHY OF THE PRIMATES.

(*Continued.*)

Makis (*Lemurs*, *Lemuridæ*, Swain).

THE Makis (extending this term pretty nearly as Buffon and Audebert did, to all those Primates which Linnæus and Shreber correctly comprised within their great genus Lemur,) constitute the lowest group which Zoologists agree to consider as belonging to the *first* order of Mammals, or *Primates*, and as forming the passage or connecting link to the second order, which we shall name *Secundates*, or Carnivora (*Carnassiers*). In fact all, with perhaps a single exception, having reference to the last genus, have still the great toe opposable, and, consequently, the feet are so modified as to perform the functions of hands; and although the dentar system be always more or less anomalous, still the number of the incisors perhaps never exceeds four; the mammæ are either two or six, and of these, two are always pectoral; the exciting organ of generation is free. At the same time we must admit that these animals, as forming a transition from one great group to another, present no other distinguishing characters which they may possess in common, than in having the snout extremely small, and the muzzle at the extremity of the jaws, and, with the exception of the Galeopitheci (*Galeopithecus*, Pallas. *Lemur volans*, Linn.) (in which it is the fifth finger or toe which is longest), the fourth or ring finger is longer than the others, and never the middle one. Lastly, the nail of the *indicator*, or second, is long, straight, and pointed, which Zoologists technically denominate *Subule* (*terminating insensibly in a point*), with the exception, however, of the L. Volans.

Notwithstanding this, the group is perfectly natural, as we shall immediately demonstrate by the scientific examination of the hard parts which enter into the organisation of the various species which compose the group, although, in this respect, we may have to prove many more variations and signs of degradation than in the preceding groups of Simiæ and Cebidæ, the more so that certain species have certain anomalies answering a final purpose.

Of the Bones of the Skeleton generally.

The Makis being still (like the American and African Monkeys) animals which live almost exclusively in trees, and on the fruits and insects which they are able to procure amongst the branches, their height never exceeds a moderate stature; they are often, indeed, extremely small, and the assemblage of bones which compose their skeleton indicates movements of prehension and leaping, in the performance of which movements the limbs are much more concerned than the trunk, which has the caudal extremity, often in a rudimentary condition.

The bones of these animals appear to me to partake more of the nature of those of Birds, being, as I have always thought, lighter, more excavated, and less close in the compact tissue than in the Simiadæ and Cebidæ.

This seeming resemblance to Birds does not extend, however, to the epiphyses of

bones disappearing so early as in Birds; and the cranial sutures are not obliterated at an earlier period than in other Mammals.

The number of bones entering into the composition of the skeleton in the Makis (*Lemurs*), as well as in their general arrangement, presents nothing which is very peculiar, except, perhaps, in the rather frequent absence of the tail, and we will now proceed to the description of the skeleton of the Maki commune (*Lemur Catta*, Linn.)* which we have selected as a type of comparison, being that species, at once the most readily procured, and presenting, unquestionably, the fewest anomalies in its organisation.

The vertebral column, *considered as a whole*, that is, the head included, bears the strongest possible resemblance to that of the common quadrupeds, by the attenuated form of its two extremities, and the curvatures being still less marked than in the other Primates, with the exception of those curvatures on the abdominal or inferior aspect, which, indeed, occupy the whole length of the column.

The total number of portions of the vertebral column is pretty considerable, since they amount to fifty-nine, viz., four cephalic, seven cervical, thirteen dorsal, six lumbar three sacral, and twenty-six coccygeal.†

The cephalic portion or head, altogether in the same direction with the rest of the vertebral column, is of a conical form, slightly elongated, not only on account of the elongation of the jaws, but also that the cephalic vertebræ themselves are less heaped together, and more spread out. The occipital vertebra (*fourth cephalic*) has, in truth, its basilar bone large, and flat, and the arch slightly elevated, scarcely projecting behind the large and nearly vertical occipital foramen; it is surmounted by a delicate occipital crest, oblique, dividing into three ridges, of which one is median, and resembles a portion of a vertical cylinder, and lodges the vermiform appendage of the cerebellum.

The posterior sphenoidal vertebra (*third cephalic*) has its body still larger than that just described, dilated right and left into stretched and excavated wings, to form the pterygoid processes, and, then ascending, reaches extensively a thin parietal bone, well spread out, though slightly elevated, and constituting the greatest portion of the cerebral vault.

The spheno-frontal vertebra (*anterior sphenoid, second cephalic*) has evidently lost its importance in reference to the cranial vault; its body has pretty nearly the form of the posterior sphenoid, just described, although much smaller, only it is more keel-shaped in its median line; with regard to its frontal arch, it is much more inter-orbitar, and its proper frontal portion, slightly extended, much depressed, forms an orbitar circle, as complete as in the Simiæ or Cebidæ, but

	in.	lin.
Length from vertex of head to sacrum	11	6
——— Sacrum to top of tail.....	21	0
Total length	32	6
Humerus, 3 in. 2 lin.; radius, 3 in. 4 lin.; wrist and fingers, 2 in. 3 lin.	8	9
Femur, 4 in. 6 lin.; tibia, 4 in. 3 lin.; ankle and toes, 3 in. 2 lin....	11	11

Vertebræ, Cervical.....	7
Dorsal	13
Lumbar	6
Sacral.....	3
Coccygeal	29
	58
Add Cephalic.....	4
Total.....	62

We have thus three vertebræ more than that of M. De Blainville's specimen; but it will be observed that these additional vertebræ are coccygeal, and, therefore, in all probability, lost in M. De Blainville's specimen. This is a very common occurrence, and, indeed, will invariably happen when an attempt is made to stuff the skin, and at the same time preserve the skeleton.—*R. Knox.*

* By a slight inattention to the synonymes, in all probability, and not to any more important cause, it would at first sight appear that M. De Blainville had neglected giving the figure of this type. In the text a distinct reference is made to the Lemur Catta or common Maki, as being the Type from which he proposes describing the group, but in the figures illustrating this volume there is not apparently one of this Lemur Catta or common Maki, unless we suppose M. De Blainville to consider the Maki Vari of Plate iii., and which is also called (L. Macoco) on the plate as being identical with the Lemur Catta. We shall leave this matter as it is, to be cleared up by the author himself, merely remarking, that M. Desmarest and most Naturalists draw a distinction between the Maki Vari, or Ruffed Lemur and Maki Macoco (*Lemur Catta* or Ringtailed Lemur). I venture to think that this slight discrepancy will be explained shortly by M. De Blainville himself.—*R. Knox.*

† A Skeleton of a Lemur (female) prepared with the greatest care as a *natural* skeleton, and which we consider as the Maki Macoco, or Ringtailed Lemur, is now on the table before me. The teeth are so much worn down as to render it impossible to give a formula of them. The cranial sutures are all completely obliterated, although the symphysis of the lower jaw is still present. The great toe is much more developed than the thumb.

Fig. 47.

Maki Vari (*L. Macoco*, Linn.) Desm. Ruffed Lemur, Shaw.
From Madagascar.

Skeleton entire viewed in profile, after a skeleton of a specimen purchased from the Isle of France by MM. Lesson and Garnot, repaired and arranged (*set up*) under M. De Blainville's personal inspection for this work.

much narrower, so that the orbitar cavity communicates freely with the temporal fossa.

The vomer, which constitutes the *body* of the nasal vertebra (*first cephalic*), is also sufficiently developed posteriorly; but then its ridge, continuing that of the anterior sphenoid (*third cephalic*), is prolonged in the form of a very narrow plate inferiorly, without forming the crista galli superiorly. The lateral portions of this part of the ethmoid bone are simple, being not in the least degree visible in the orbits.

In respect to the nasal bones, they differ considerably from those of the Simiæ and Cebidæ, being, in fact, much more elongated, slightly excavated on their external margin, and terminating anteriorly by a deeply-cut margin; they terminate a little posterior to the line of the intermaxillary bones.

The jaws follow, and even exceed a little, this elongation of the anterior cephalic vertebra, and thus the length of the palate exceeds by rather more than half that of the basilar line.

The internal pterygoid or posterior palatine root of the upper jaw, is in the form of a large scale, applied to, and intimately connected with, the external pterygoid process; it reaches as far as the anterior sphenoid; and its hook-like process is scythe-shaped, and very much developed.

The lacrymal bone (lacrymal root of the upper jaw) is also large, triangular, and, in a great measure, external to the orbit, and it is in this portion that we find the oblique and compressed nasal canal.

The malar bone (or zygomatic root of the upper jaw) has, on the other hand, lost its importance, although it has still its three divisions or branches; but all these are much more slender than in the other Primates; the inferior, or maxillary branch, still constitutes a considerable part of the orbitar circle, and it is perforated externally by a large malar foramen, as in most of the Cebidæ; the superior or frontal branch articulates with the external orbitar process, but its narrowness prevents it from joining the sphenoidal wing, and, consequently, from closing in the orbit; the temporal branch is only remarkable for its great delicacy.

The anterior palatine (*palate bones, human anatomy*) has its ascending branch slightly elevated, but large, and its palatine, or horizontal branch, bordered with regard to its free margin, regularly semicircular, and advancing by its greatest curve mesially, as far as the line of the principal molar tooth.

The maxillary bone is long, slender anteriorly, with its ascending branch but slightly elevated, which forms no part of the orbitar circle, and which is perforated with only three small sub-orbitar foramina; its inferior margin is excavated with large and deeply-cut alveolar cavities.

The inter-maxillary bone is still more delicate than in the preceding Primates, particularly its horizontal or palatine portion, dividing, nevertheless, to form, as usual, a round and considerable incisive foramen; the ascending branch ascends as far as the nasal bones, and, consequently, with the nasal bones, surrounds entirely the nasal aperture.

The lower jaw, the description of which we commenced with that of the rocky bone (petrous portion of the temporal), is small, and much concealed by the surrounding bones; we may say the same of the mastoid process, which scarcely forms a projection.

The *ossicula auditûs* are also, generally, extremely small, resembling strongly, however,

those of the other Primates; the *stapes* is, nevertheless, more prolonged; its branches are more delicate, more elevated; the *orbicular* bone is narrower than the branch of the *incus*, with which it articulates. The *incus* has its two branches nearly equal, its *head* very large, rounder than that of the malleus, whose *handle* is, on the contrary, proportionally longer, and terminated by a small spatula-shaped dilatation.

The tympanum or bulla which contains these ossicula is, on the contrary, large, swollen, semi-globular, articulating, by an external anterior process, with the posterior margin of the external pterygoid process, and the external auditory opening is large, superficial, without a distinct tympanic circle.

The squamous portion of the temporal bone is, perhaps, still less extended than in the Simiæ and Cebidæ; it presents, however, that venous cranial opening behind the condyloid process, which exists in so many of the American Monkeys; but the zygomatic process is still weaker than in the Sapajou.

The mandibular portion of the jaw is long, narrow, and much depressed in its ascending process, which is nearly as broad as it is elevated; its coronoid process is much more elevated, more arched, than in any species of the Cebidæ; and we may make the same remark with regard to the angular process, which is well-developed, and of a crotchet shape; the horizontal (dentar portion) very narrow, has its margins nearly parallel, the one convex, the other concave; the symphysis oblique, slightly extended, and the anterior opening of the inferior dentar canal small, situated midway between the second and third molar teeth.

The cavities, compartments, fossæ, orifices, and foramina, which the cephalic vertebræ and their appendages form, or contribute to form, differ very distinctly from those which we have seen in the two preceding families of Primates. Thus, the facial angle is not more than fifteen degrees; the area of the nasal cavity is scarcely equal to that of the cerebral cavity; the transverse diameter of the cerebral cavity is to that of the foramen magnum (vertebral opening) nearly in the proportion of three to one.

The cerebral cavity presents still considerable development; its general contour is oval, shortened, and depressed; the digital impressions on the vault and sides strongly marked; the fossæ in the base, on the contrary, perhaps less precisely circumscribed than in the other Primates.

The basilar fossa is, nevertheless, large, excavated, and well defined; the pituitary fossa is not so well marked, on account of the total absence of the clinoid processes; the ethmoidal fossa is much larger than in the Simiæ or Sapajous; its cribriform plate is large, and perforated with a great number of openings, divided into three groups on each side by two oblique ridges, the anterior much larger than the posterior, which is the smallest.

The lateral fossæ in the cranial cavity are, on the contrary, proportionally smaller than the median; the cerebellar or posterior is more defined, particularly towards the median line, and in the cavity connected with the rocky bone, which is hemispherical, and deep.

The temporal fossa is not deeply sunk, and, like the orbit, is very much advanced upon the face; the vault of the orbit makes a very slight supra-orbitar angle, being besides very flat.

The foramina for the passage outwards of the nerves, are generally very small; this is the case with the condyloid foramina, the posterior lacerated foramina, divided into two by a projection, with the basilar (?), with the foramen rotundum, the foramen ovale, the former far removed from and the latter very near the spheno-maxillary fissure, which fissure resembles an oval foramen; the foramina optica partake of the general character of the others.

In respect to the foramen magnum, we have already alluded to its great proportional size, the oblique position of its plane, and its almost terminal position; the condyles, also, are widely separated, and the occipital crest scarcely projects beyond them.

The cavities for the organs of sense have been already pretty nearly described in our account of the portions which form them.

The auditory cavity, as a whole, is small, and does not extend into the surrounding bones.

The ocular cavity (*orbit*) is large, funnel-shaped, oblique; its axis much more diverging than in the Simiæ and Cebidæ. We have already remarked, that the orbit is only complete in respect to its outline, which is deeply cut at its nasal origin, that the upper opening of the lacrymal duct is facial. The sub-orbitar canal terminates by one oval, compressed foramen; but there is a large malar foramen very low down, the same with the spheno-palatine, confounded with the posterior palatine.

The olfactory cavity is very much elongated, communicating superiorly with the cranium by an extensive cribriform plate, and terminating posteriorly by a large palatine opening like the mouth of a furnace, and opening anteriorly in a slightly oblique plane by an oval orifice placed vertically.

The olfactory cavity has no extension in the bones of the head; in other words, *there are no traces of frontal or sphenoidal sinuses.*

The superior ethmoidal turbinated bones are very small, the middle turbinated are very much elongated, and the inferior (*true turbinated, maxillary turbinated*) are still longer, inversely bent, coming off at a

right angle from the lamina by which they are attached to the maxillary bone.

The gustatory cavity or mouth formed like the nasal, since the palatine vault is common to them, is, in other respects, large, sufficiently excavated, semicircular posteriorly, and circular anteriorly, with the incisive foramina well marked, semicircular, and large.

The cervical region, longer than in the Simiæ or Cebidæ, nearly equals one half the length of the thoracic region; the transverse processes of the atlas are already expanded, the spinous process of the axis is large, although not much elevated, presenting, in other respects, a strong resemblance to the third, fourth, or fifth vertebra, by the size of the arch, the carinated imbrication of the body, and the slightly serrated imbrication of the transverse processes. The sixth vertebra has the internal lobe of the transverse process styliform; and the seventh vertebra, whose transverse process is long and rib-shaped, has, on the other hand, its spinous process weak, slender, and spine-shaped, scarcely exceeding in height that of the four preceding vertebræ, whose spinous processes resemble that of the seventh in every respect.

The thoracic region of the spine has thirteen vertebræ,* generally narrow and short, their spinous processes are but slightly raised, narrow, equal in length, the first nine pointing towards the tail, the tenth nearly vertical, and the three last, pointing towards the head, resembling very much those of the lumbar vertebræ.

The lumbar region has six vertebræ, increasing gradually as far as the fourth, and then decreasing;† the spinous processes point all towards the head, are narrow, and slightly arched; the transverse processes increase in length from the first to the last, which is entirely inter-iliac; the anterior articular processes slope considerably, but the styloid divisions of the posterior articular processes are of medium dimensions.

The sacral region has only one vertebra articulating distinctly with the ilium, and a second united to the first; but I think that a third vertebra may be included as sacral, although not united, owing to the size and form of the transverse processes. These three sacral vertebræ differ but slightly from the last lumbar, except in the vertical position of their spinous processes, and greater breadth of the transverse processes.

The caudal region, consisting of long and very slender vertebræ, commences by three or four vertebræ, which are complete, short, their spinous processes not developed, their transverse processes narrow, and moderately inclined downwards and backwards. The succeeding vertebræ increase in length as far as the fifth or sixth, then gradually decrease, becoming very narrow. The V shaped bones, which exist only between three or four of the first coccygeal vertebræ, are but slightly developed.

The cephalic sternebra (hyoid apparatus) would in itself indicate the descent towards the Carnassiers; in fact, its body, narrow transversely, and slightly arched, becomes slightly enlarged at each extremity, supports a pretty long anterior or styloid horn, formed of three pieces, decreasing slightly in size, the two first equal, the third longer, more delicate, terminating, assuredly, in a point.

The thoracic sternebra (*sternum*) partakes also of the character of that of the Carnassiers, since it is narrow, particularly anteriorly; it is composed of seven bones, the first slightly enlarged only in its anterior half, for the articulation of the clavicles and first pair of ribs, and compressed in its other half, like the succeeding sternebræ, the posterior of which becomes, nevertheless, larger and flatter; the terminating sternebra, or xiphoid process, is long and narrow, but still equally flattened out at each extremity.

The ribs (thirteen pairs in all, of which there are eight pairs sternal and five asternal,) are all very much arched, delicate, and even slightly compressed at their vertebral extremities; the last becoming suddenly much more slender than the others. The sternal appendages are also long, and narrow at their sternal extremities, becoming enlarged and flattened towards their costal extremities.

The thorax, thus constituted, is still sufficiently extended laterally, and of medium length.

The disproportion of the limbs is well marked in favour of the posterior or pelvian.

The scapula, perhaps a little smaller proportionally than in the Cebidæ, is certainly narrower, and the fossæ are, consequently, smaller; the spine is a little less elevated, and its acromion process is more vertical. The coracoid process still retains a good deal the form of that of the Primates, but it has no trace of that bifurcation at its base, as seen in the Guenons, and especially in the Sapajous.

The clavicle is smaller than in the Sapajous; and, in truth, it scarcely equals in length two-thirds of the scapula, whilst in

* Daubenton only reckons twelve in the Macoco (*L. Catta*, Linn.). A carefully-prepared skeleton in our own museum, Old Surgeons' Hall, has thirteen.—*R. Knox.*

† In our skeleton of the Lemur, to which we have already alluded in Note p. 386, the lumbar vertebræ increase gradually to the last, which is, unquestionably, the largest, not only in respect to its body, but all its processes. The sacral vertebræ, which, it will be observed, M. De Blainville found to be broader than the last lumbar, are in ours narrower; circumstances which, no doubt, indicate slight specific differences in the animals.—*R. Knox.*

the Sajou it equals four-fifths of the scapula; it is, also, considerably more straight, and formed as it were of a single curve.

The humerus equals only the first ten dorsal vertebræ in length; it is, in the mean time, more delicate, and longer than in the common Sapajous. The deltoidean crest and impression scarcely extend beyond the upper third of the bone; there is an oblique short osseous canal in the internal condyle, and the crests (ridges for the attachment of the intermuscular septa), even the external one, are not prominent.

The radius and ulna are also delicate, arched in opposite directions, with a very sharp internal concave edge; in other respects resembling those of the Sajous.

The carpus seems, proportionally, slightly more extended, and although it is composed of the same number of bones as in the Simiæ, their proportions indicate a tendency towards the Carnivora. Thus, the scaphoid is very much elongated, occupying nearly the entire articular surface of the radius; the semilunar bone is, on the contrary, extremely small, the os triquetrum (*cuneiform*) being again much larger, and sub-cubical. The pisiform bone resembles that of the other Primates.

The intermediate (*ninth*) bone is small, and has here the appearance of being merely a part of the scaphoid.

The trapezium, having a triangular form, is scarcely larger than the trapezoides, which is still, however, the smallest of the four bones forming the second row of the carpus. The os magnum and unciform are extremely like those of the Cebidæ, with this difference, that the *magnum* articulates solely with the intermediate (ninth bone) not extending so far as to touch the semilunar.

The hand as a whole, including the carpus, equals nearly the radius in length, and is thus a little longer in proportion than that of the Sajous.

The proximal phalanges of the thumb and index finger, are, perhaps, proportionally longer in relation to the metacarpal bones: the phalanges, generally, are more arched and longer, especially the middle phalanges, which are, besides, canaliculated inferiorly; the distal phalanges shorter, are each more extended out at their extremities than in the Sajous; and, lastly (a state peculiar to these animals), their distal or nail phalanges are the parts of the ring fingers which are more especially the largest.

The posterior limbs (*pelvic extremities*) are, upon the whole, more delicate, and longer than in the other Primates.

The pelvis, generally speaking, is weaker and narrower; its pelvic articulation is less, with its anterior margin more oblique than in the other Primates; the length of the *os innominatum* scarcely equals that of the first ten dorsal vertebræ. The iliac fossæ are very narrow; the anterior extremity (*crest*) of the ilium extends greatly beyond the sacro-iliac articulation, which, as we have already remarked, is confined to one vertebra, the ilio-pectineal spine (*ilio-pubic spine*) is large and well-marked, and the ischiatic tuberosity is still more delicate than in the Cebidæ.

Thus, the degradation is manifest, indicating a tendency to a mode of progression, more approaching that of the quadrupeds (more terrestrial?). The remaining parts of the limbs continue in this direction, i.e., like that of the quadrupeds.

The femur is long, rather delicate, enlarged superiorly into a powerful external trochanter (*trochanter major*), thick, rising considerably above the *head* of the bone, and prolonged externally, so as to form a sort of third trochanter. The shaft of the bone is nearly straight.

The bones of the leg resemble very much the Guenons; the two bones which form this region, are in the Lemurs, still more delicate and nearly straight; the malleoli which they form, are equally prominent externally and internally, by the increase in size of the extremities of the bones; nevertheless, the articular mortise is less deep, and especially more open.

The foot, as a whole, presents nearly the same proportion in respect to the leg, as in the Guenons; it is, however, generally speaking, narrower, and the tarsal region is proportionally a little longer. The *head* of the astragalus is still more oblique than in the Cebidæ, and its pulley is a little flatter; the os calcis is longer, narrower, especially in its articular part. The other bones of the tarsus present no important particulars, if it be not the remarkable smallness of the second cuneiform, and great length and narrowness of the third cuneiform.

In respect to the toes, the *first* is certainly the largest, more so than in the other Primates; and this is the more remarkable, inasmuch as the other toes in the Makis are more delicate; the three bones (metatarsal and two phalanges) of the great toe are stronger, larger, especially the distal phalanx, than in any of the Simiæ or Sapajous.

The four remaining toes resemble those of the Cebidæ, particularly in respect to the metacarpal (*metatarsal*) bones, as well in respect to their length as proportional bulk; but this is not quite the case with the phalanges, it is (even more than in the hand) the fourth toe which is the longest, not only as a whole, but in each of its parts; but, moreover, the distal phalanges of the third, fourth, and fifth toes, are slightly dilated at their extremities, and that of the second toe is even nearly pointed, or claw-shaped.

All the skeletons of the true Makis or Lemurs, as modern Zoologists have defined them, that I have seen, present very slight differences in their comparative anatomy,

and even these are not easily shown, excepting by the skill of the artist.

I find, in the mean time, what seems deserving of notice, that the Maki Nain (*dwarf, L. Murinus*, Penn. *Galago de Madagascar*, Desm.) has an additional lumbar vertebra (seven instead of six), as in our typical skeleton, but that which seems of more importance is, that the tarsus is more elevated than in the other species, in consequence of the greater length of the calcaneum and scaphoid, which actually resembles a small coccygeal vertebra. The cuboid is evidently more elongated, so that this species ought to commence or stand at the top of the Makis, and thus be placed in immediate juxta-position with the Galagos (*Lemur Volans*, L.,) which have, in fact, like it and the Tarsier (*L. Spectrum*, Geoff.) three pairs of mammæ.

We may make nearly the same remarks with regard to the Maki de Milius; it has also the seven lumbar vertebræ, increasing from the first to the last, and the tarsal region is also longer than in the other Makis; but in the L. Milii, it is the astragalus, and not the scaphoid alone, which follows the well-marked elongation of the calcaneum, and which gives to each bone of the tarsus of this little animal something quite peculiar (*specific*).

LECTURES

ON THE

FUNCTION AND DISEASES OF THE WOMB,

Delivered at his Class Room,

Bartholomew-Close, St. Bartholomew's Hospital.

BY CHARLES WALLER, M.D.

LECTURE XII.

Hydatids of the uterus: description of; sometimes many, at others single; size various; colour generally white; opinions respecting their formation; seldom occur in unmarried persons; generally combined with utero-gestation; symptoms; how to be distinguished from advancing pregnancy; mechanical effects; diagnosis; after a time the uterus begins to act; practitioner often not called until this period.—Treatment: their growth cannot be prevented; nothing required in early stage.—Treatment when hæmorrhage supervenes: endeavour to excite uterine action; application of cold; ergot of rye not in all cases to be depended upon; discretion required respecting stimulants; plug; external pressure; introduction of the hand; after treatment.—Single hydatid of the uterus; hydrometra of the ancients; symptoms neither dangerous nor alarming; illustrative case; little or no treatment required.—Concluding remarks.

HYDATIDS OF THE UTERUS.

The disease called hydatids is not a peculiar production of the uterus, as it is often found in other parts of the body; neither is it confined to the human subject alone, some animals, the sheep especially, are frequently affected by it.

Hydatids, according to the Linnean system, constitute a tribe of the genus tenia, and belong to the class and order of intestinal worms. They are characterised by being furnished with a vesicle, which is sometimes attached to them posteriorly, or in which some of them are altogether enclosed. They occasionally exist singly in the uterus, but more generally hang together in clusters, each little vesicle being attached to its fellow by a very delicate filamentous thread, the whole presenting an appearance very similar to a bunch of grapes; they are connected with the lining membrane of the womb by a thickish substance, resembling fibrine, having, nevertheless, a bloody appearance when first expelled from the uterus. The size of these vesicular bodies varies, some are very *small*, whilst others are as large as the egg of a thrush; when macerated and perfectly freed from blood, they are generally colourless. Dr. Baillie, however, states that he has, in many cases, seen hydatids of the liver of a pale amber colour.

Various opinions have been entertained with regard to the formation of uterine hydatids. As they so commonly exist in connection with a dead ovum, some have attributed their origin to this circumstance, whilst others believed that the death of the ovum has been the *effect* of the previous existence of hydatids in the cavity of the womb; that, in truth, these animalculæ were the actual devourers of the fœtus. Dr. Blundell, late of Guy's Hospital, has preparations showing this work of destruction in progress. I have never seen a case of uterine hydatids in an unmarried female, and am not aware that it has been observed by others; still it would be wrong to assert that these bodies cannot possibly form without sexual intercourse; and, therefore, if called to an unmarried woman, from whose uterus hydatids were growing, I should not feel justified in expressing an opinion which might prove injurious to her reputation. Wherever there exists a reasonable doubt, it is but an act of common justice to give the patient the benefit of such doubt.

I have stated to you that married women are very generally the subjects of this disease, and not only married, but in a state of pregnancy; the symptoms, therefore, at first are those which are attendant upon that condition, but after the death of the ovum the signs of pregnancy disappear. The uterus, instead of diminishing, increases in size, in consequence of the enlargement of the hydatids within its cavity; and, therefore, it often happens that the medical man, as well as the patient, is de-

ceived, as they imagine pregnancy to be still advancing. There is this marked difference, however, between the two: the enlargement which is the result of conception is slow, whilst that from hydatids is very rapid. Again, there is the absence of the sensation called "quickening," although there may be a kind of indistinct flutter perceived by the patient herself, probably caused by flatus; or, perhaps, it may depend upon that power of contraction which the hydatids themselves possess. Sir Charles Clarke states, that although hydatids in other parts have this power, yet it has never been observed in those of the womb; it, however, by no means follows that because they have not been seen to contract *out of the body*, that they therefore never contract *within* it; indeed, a presumption to the contrary may, I think, be fairly entertained.

Again, in contra-distinction to pregnancy, I may observe, that with this increasing tumid condition of the abdomen, the correspondent changes in the breasts, so commonly observed in pregnancy, are absent; they become flaccid, diminishing, rather than increasing in size. The uterus itself, when examined through the abdominal coverings, will be felt to be distinctly enlarged, but it does not oppose so firm a degree of resistance to the hand as the impregnated womb; and in some instances, where the parietes of the organ are preternaturally thin, an obscure sense of fluctuation may be easily felt.

Symptoms.—The usual symptoms of uterine irritation are present in this disease, namely, pains in the back, loins, and forepart of the pelvis; the stomach is often sympathetically affected; there is loss of appetite, nausea, or vomiting. As the womb increases in size, various unpleasant symptoms, which are the more mechanical effects of pressure, will be produced; thus the functions of the bladder and the rectum will be interfered with. Attention to these organs forms a very important part of the duty of the practitioner, as it is probable that several months may elapse before symptoms, demanding any but palliative measures, manifest themselves.

It is thought by some that there is a disposition in the uterus to remain in a quiescent state during nine months, the usual period of gestation. My own experience does not corroborate this opinion, the time appearing to depend principally, if not entirely, upon the degree of irritability of the uterus. In some women a greater degree of distention will be borne than in others, before the organ is sufficiently irritated to be stimulated to action. Before this time, there is, in most cases, a discharge of pale, limpid fluid, resembling water, without colour or smell, more especially if the female make use of any considerable exertion, or be subjected to any sudden shock, such as a blow or a fall. This effusion arises from the bursting of the vesicular bags, and the consequent escape of their watery contents. These discharges occur in gushes, and at intervals only, a circumstance worthy of being retained in your memory, because it will assist in forming a correct diagnosis, as there is another disease of the uterus, the cauliflower excrescence, in which discharge of water forms a very prominent symptom; but in this latter affection, it proceeds from the uterus in a constant and uniform drain, and not in occasional gushes. From those large and frequently repeated effusions of water, which now and then take place for weeks, and sometimes for months during the pregnant condition, and which appear to arise from a diseased state of the membranes of the ovum, we may distinguish this disease, by observing that all the symptoms of pregnancy have subsided, a subject which has already been referred to. I may just remark, in passing, that although the membranes of the ovum are not in a sound state, yet these discharges do not interfere materially either with the general health of the individual, or with the process of gestation. Perhaps it may be asked, why *disease* should be inferred if no inconvenience be necessarily produced? My opinion is formed from the two following circumstances: first, because these effusions are certainly not natural; and, secondly, because in these cases the placenta will often be found morbidly adhering to the sides of the womb.

After an uncertain period of time, the distention of the uterus is such as to produce an active state of contraction, when, from the bursting of a large number of the vesicles, water is discharged in considerable quantities. But the discharge is not often merely water, for at this period it is usual for a very alarming and dangerous hæmorrhage to supervene, in a degree sufficient to place the life of the patient in immediate and imminent peril, and if it be not speedily arrested, her destruction is certain. If any doubts had previously existed regarding the true character of the disease, they may now be set at rest by examining what is passing away, for by the uterine contraction the filaments or stalks, already described as connecting the vesicles together, are broken off, and hence there are frequently bunches of unbroken hydatids mixed with the water and the blood. They are sometimes of large size, at others small and exceedingly delicate. Here is a specimen of the former variety, presented to my museum by Mr. Cox, of New Bridge-street; and here is an exceedingly beautiful preparation, showing the latter, the gift of Mr. Finer, of Kingsland-

road. Observe another preparation, in which the hydatids have formed within the *substance* of the womb itself.

It is very probable that no reference will be made to the medical practitioner before the occurrence of the alarming symptoms just noticed, and he therefore finds himself suddenly called upon to act in a case of great and urgent danger, where the utmost promptitude of treatment is required. Many of these cases do not admit of a radical cure, even where the efforts of the womb have expelled the whole of its contents, for they are apt to be reproduced, when the same dangerous symptoms will be renewed.

Treatment of Uterine Hydatids.—There are no known remedies which will prevent either the formation or growth of uterine hydatids, nor do we possess any means whereby we can procure their expulsion in the more early months; all that can be done is to explain to the female the nature of her disorder, and to attend to any symptoms that may arise, patiently waiting until, from the distended state of the womb, its extraordinary action is excited; and this, as before stated, will occur, sooner or later, varying greatly in different individuals: the sooner this contraction takes place, the better will it be for the patient, as the blood-vessels increase in proportion to the enlargement of the uterus, and, consequently, are of smaller size in the earlier months. The os uteri, under these circumstances, is usually considerably dilated, so that the finger can, with ease, be introduced into the cavity, and the hydatids distinctly felt. If, however, the *hæmorrhage* be not alarming, no manual interference of this kind is either necessary or proper: the main object of the practitioner is to controul the hæmorrhage; to this purpose all his efforts must be directed. The flow of blood, be it remembered, is in some instances so excessive, that the female's life is in immediate peril, the gushes being as profuse as during the puerperal condition; indeed, they *appear* much more so in consequence of the large quantity of watery fluid with which they are mixed. In the attempt to restrain these bleedings, we must not forget that the only effectual method consists in exciting a general, perfect, and permanent action of the muscular fibres of the uterus, without which its renewal is certain. Confinement to the recumbent position is imperatively required, and every circumstance carefully avoided, which would be likely to produce either bodily or mental excitement. In some cases (that they are rare must be admitted) this plan of treatment, combined with great attention to diet, is all that is required, especially where the action of the uterus is powerful; of course no nutriment, of a stimulating kind, should be allowed, and everything should be received into the stomach nearly or quite cold, caloric, as you know, having a great tendency to excite the action of the heart and arteries. Next, in the list of remedial means, I would place the application of *cold*: a bladder, containing pounded ice, as recommended, in a previous lecture, should be placed upon the lower part of the abdomen; a piece of ice has by some been recommended to be introduced within the vagina, by which a sudden state of contraction is often procured.

The *ergot of rye* may be employed in these cases with some degree of confidence, much more so than in the disordered condition of the function of menstruation, called menorrhagia. From what I have myself observed, respecting the operation of this medicine, I infer that its action cannot be relied upon, unless the uterus be *developed* and endowed with its *extraordinary* power of contraction, nor even then unless that action has been already excited; in other words, that it will never *produce*, although it will increase, when already present, the parturient efforts of the organ; and, consequently, that even during labour, when there is a complete suspension of uterine action, its effects are by no means so certain as when the pains are regular, but trifling in degree; it does not appear to me to have the power of *communicating* irritability to the womb. In the disease under consideration, however, there is a developed condition of the womb, and there are also the regular expulsatory pains: your intention in giving secale is to increase their force, that the diseased mass may be the more quickly detached and expelled, and thereby to obviate the danger to be apprehended from the continuance of the hæmorrhage. About half a drachm of Battley's concentrated solution should be administered, at occasional intervals; the medicine may be taken in a glass of water, or in brandy and water, or any other vehicle, according to the judgment of the practitioner.

Discretion is required in the *use of stimulants*. I have already stated they are altogether inadmissible in the early stages, before the discharge of blood is considerable, and even in the more copious hæmorrhagies, where a tendency to faintness has supervened, they should not be too hastily had recourse to, for under these circumstances, not only is the momentum of the blood greatly diminished, but that fluid coagulates much more speedily; by this coagulation clots are formed, which, by adhering around the orifices of the bleeding vessels, act as little plugs, and afford a temporary barrier to the farther irruption of blood. Now, the obvious effect of a stimulus is the excitement of the arterial circulation, in all probability the removal of these coagula, and then, as a necessary consequence, the renewal of the hæmorrhage. Do not consider the observations just made to contain a general condemnation of the use

of all stimulants; I believe we shall scarcely ever be able, *altogether*, to dispense with them; but I wish to impress upon your minds the propriety of waiting until the symptoms, really demanding their employment, have manifested themselves. When hæmorrhage has continued for a lengthened period, and the attacks of syncope become frequent and formidable, a stimulant is peremptorily required, for without it the patient, in many cases, would never rally; a tablespoonful of some ardent spirit (and of these brandy is to be preferred) must be given undiluted or mixed, with part of the yolk of an egg, and repeated at such intervals as the peculiar case requires.

A well applied *plug* is productive of advantage where the uterus is not greatly increased in size, especially if its mouth be nearly closed; this will not only assist in restraining the flow of blood, but by its presence in the vagina will excite the uterus to action, and thus afford permanent as well as temporary relief. Pressure upon the uterine region should be maintained by the application of a pad, round the lower part of the abdomen, around which a tight bandage or belt is to be fastened; a small book, enveloped in a napkin, forms an excellent pad for this purpose, and this is one which can be obtained without any delay, which is of great advantage in cases of such emergency.

Notwithstanding the assiduous employment of all these means, there are instances wherein the dangerous symptoms continue or increase, and the constitutional powers of the female appear to be rapidly sinking. This will be manifested by repeated attacks of syncope, by a general coldness of the surface, by a rapid though feeble pulse, combined with that pallid and peculiar cast of countenance exhibited in hæmorrhagic patients: in this extreme form of the disease *manual interference* is necessary. As soon as the os uteri is sufficiently dilated, the hand is, with great caution and gentleness, to be introduced into the cavity of the womb, and the hydatids carefully separated from their attachment, taking especial care that the whole mass be removed before the hand is withdrawn. This operation is attended not only with difficulty, but with some degree of hazard, and this will be increased if the attempt be made too early, for the womb is not in so dilatable a condition as at the time of labour, and, therefore, resists rather than yields where force is applied; and hence, if Dr. Blundell's motto "*arte non vi*" be disregarded, rupture of the uterus might possibly be induced.

After Treatment.—After all the hydatids have been expelled by Nature, or removed by art, we must treat our patient precisely in the same manner as if she had been recently delivered, and her labour complicated with hæmorrhage. The bandage around her abdomen is to be tightened, and no change of position allowed: our feelings sometimes get the better of our judgment in this respect, for in consequence of the often-repeated desire expressed by our patient, we permit that change. This restlessness, however, is merely the effect of loss of blood, and will not be relieved by any alteration in her bodily position; even were it otherwise, perfect quietude must be enjoined, as the vital powers are so exhausted, that a movement, even from one side to the other, would probably produce such agitation that fatal syncope might be the result. When the circulation has become somewhat tranquil, the female may be placed comfortably in bed; but my advice is, that after every serious case of hæmorrhage, the practitioner should be in the room to give necessary directions, and especially to prevent her body being raised from the recumbent posture during the time of undressing. I generally recommend a mattrass to be placed on the floor, upon which the patient is to be placed, whilst the nurse is attending to her bed, &c.

After hydatid disease, there is sometimes a tolerably copious secretion of milk, which soon subsides after a laxative has been administered. Lastly, it is often necessary, in consequence of extreme debility resulting from this affection, to employ tonics and cardiacs for a long space of time, a return to perfect health and strength being often very protracted and tedious. Every thing likely to increase tone in the general system is here required, avoiding, of course, all local stimuli.

SINGLE HYDATID OF THE UTERUS.

Hydrometra-Ascites Uterinus.—"There are upon record," says Dr. Denman, "many histories of this dropsy, which is described as a collection of water, or thin gelatinous fluid, in its cavity, the os uteri being so perfectly closed as to prevent its escape." The doctor, however, in common with other practitioners who have directed their attention to uterine diseases, is not inclined to believe that cases of this kind ever exist, as it is difficult to conceive that large collections of water can take place in the womb, as this organ communicates with the os externum by an open mouth, and, consequently, the fluid would of necessity escape as fast as it was secreted. Moreover, it has been noticed in several instances that after the water has escaped, a membranous bag has been expelled, which, on being blown up with air, put on the form of the womb itself, indeed, appearing like the lining of that organ. From this circumstance it has been considered probable, that what by the older authors was designated uterine dropsy, really belongs to a class of hydatid disease, the difference being this: that instead of consisting of bunches of little cysts,

there has been a single one of *large size*, sufficient to distend the uterus to a very considerable extent. Cases of this nature, you may suppose, are very rare, when I tell you Sir Charles Clarke states in his work that he never witnessed an instance of the kind.

The *Symptoms* characterising the disease are those which are very likely to be mistaken for pregnancy. There is suppression of the catamenial flow, with stomach irritation; the breasts are also sympathetically affected. I cannot, however, better describe these symptoms than by relating the only case of the kind which has come under my own personal observation. The lady was under the care of my esteemed friend, Mr. Austin, of Red Lion street, Clerkenwell, a surgeon in very extensive practice. She supposed herself to be pregnant, the menstrual function having been suspended, and the uterus gradually increasing in size. After the lapse of some months, labour pains came on, and Mr. Austin was sent for, the patient believing she was about to miscarry. An immense quantity of water passed away, and the uterus returned to its original unimpregnated size. This female soon recovered, and has since borne several children. This, then, is the history of these cases: the womb enlarges to a greater or less extent, according to the degree of irritability of that organ; then contraction occurs, and the watery contents of the bag are evacuated; and, lastly, the bag itself is forced away. In this variety of hydatid growth there is no danger, as there is no attendant hæmorrhage, and for this reason the doubt that probably existed, with regard to the nature of the affection previously to the occurrence of uterine action, will be of comparatively little consequence, especially as no particular treatment will be required. It will be proper, however, carefully to examine into the state of the patient's general health, and to apply such remedies as her peculiar condition may require. I have previously stated, that when the hydatids grow in masses or bunches, the disease is very apt to be renewed; here, on the contrary, the expulsion of the cyst is usually followed by perfect restoration, the patient being ever afterwards entirely free from this disorder. The proper functions of the uterus are only for a time interfered with. The accumulation of water is often very large; in the case just mentioned to you, as attended by Mr. Austin and myself, the account given by the patient was, that a pailful of fluid had been discharged.

I have now, Gentlemen, brought to a conclusion my remarks on the *function and diseases of the unimpregnated womb*. In a subsequent part of the course I shall describe the important changes which take place in that organ after conception has taken place, and shall also bring before your notice the diseases of the puerperal womb: In the mean time, let me again advise you to pay great attention to uterine diseases; seek every opportunity of becoming acquainted with them; mark well their diagnostic signs; and, above all, aim at acquiring that manual dexterity, without which your examinations, *per vaginam*, will be worse than useless. By so doing you will be preserved from the commission of many blunders, saved from much mortification, and prove yourselves a blessing, instead of a curse, to the more interesting portion of mankind.

LECTURES

ON THE

ORGANS OF REPRODUCTION IN THE ANIMAL KINGDOM.

DELIVERED IN THE ROYAL COLLEGE OF SURGEONS, LONDON.

By PROFESSOR OWEN, *F.R.S.*

LECTURE VIII.—MAY 7, 1840.

In the class Annelida we take leave of non-sexual reproduction; the Nais and the Planaria are the last of the animals which have the power of reproducing their species by fission, while they possess, at the same time, both male and female organs on the same individual. In the Leech, we find eighteen testes, a multiplication which leads us to an analogy with the vegetable kingdom. Beneath the penis is a vulva, and in the interior are two ovaria, two oviducts, and a prostate gland. In the Earth-worm, the numbers are reversed; there are eight ovaria and only four testes, with no prostate. The ovaria are tortuous and long, their communication with the vulva serving merely for the transmission of the fertilising fluid to the ova, like the tubes in the stigma of plants, and not for the passage of the ova. When the ova are fully formed, the ovaries burst, and the ova, scattered in the interspace between the alimentary canal and the external integument, pass backwards to the anal cavity, from which they are expelled in a variable degree of development, according to the nature of the soil in which the parent dwells. From Annelida we proceed to a somewhat higher class, the Cirripedia, in which is seen a dendritic combination of male and female organs, two testes, and an ovarium situated in the stem of the pedunculate group and on the base of the shell in the sessile. Upon their extrusion from the ovary the

ova pass into the interspace between the body of the animal and the mantle, where they undergo a kind of incubation, increasing in development and growth, and finally quitting the parent in the form of minute entomostracous crustacea, furnished with legs, of which the anterior pair is supplied with sharp hooks. Such is the extraordinary change which Barnacles pass through previously to attaining their perfect condition. In external form and permanent attachment, and in the presence of numerous ciliated organs, Barnacles bear considerable resemblance to the fixed Polypes; but in internal structure, in the possession of articulated members, and of a double nervous cord, their natural affinities to crustacea are strikingly evident.

Crustacea.—The class Crustacea is divisible into two principal groups, distinguished by the form of the oral organs. The lower group is characterised by the possession of a suctorial organ, and the higher of strong lateral maxillæ. All the Crustacea, with the exception of the genus Apus, are diœcious, and provided with sexual organs more highly developed than in the preceding classes. The maxillary Crustacea have the additional peculiar character, that the sexual organs themselves, and not their ducts, are united.

The minute *Entomostracous or Suctorial Crustacea*, are found adhering, by means of their suckers, to the surface of the cornea and skin of fishes; while some embed themselves in deep holes which they bore in the integument of these animals. They were named by Lamarck, Epizoa; and by Linnæus, Lerneæ. They are remarkable for the great difference of size between the male and female; among the Entozoa, the males are the smallest; but among the Lerneæ, the males remained for many years unknown to comparative anatomists from their extreme minuteness. The males have four testes and two tubular organs at their anal extremities; they are frequently found upon the body of the females near the two vulvæ, sometimes there are two or more males upon the same female. In the female there are two utriculi, or cæcal ovarian sacs. The ova are produced in their parietes in the form of very minute transparent vesicles; a second vesicle then makes its appearance around the preceding, but they remain adherent at one point. The first is the true germinal vesicle, and in the interspace between the two the vitelline granules are deposited. They are impregnated in the ovarium, and in their progress along the oviducts undergo a progressive development, so that near the termination of the latter, all appearance of the germinal vesicle is lost. They are then expelled into a large sac, which is produced from each vulva of the parent, and in this receptacle they undergo a still further development.

We may use the same reasoning here, with regard to the young of the Lerneæ, that we did in reference to the Barnacles. Had the young Entomostracous Crustacea escaped from the vulval sacs in their perfect form, and possessed of the natural predatory instincts of the parent, they would immediately have fixed themselves upon the body of the fish on which they were generated, and by their extreme numbers have destroyed the life of the animal, and at the same time their own means of subsistence. But this is not the case, for upon leaving the ovisacs they are found to be provided with two pairs of natatory organs, which are developed within the chorion. On bursting the chorion by a process of ecdysis, they possess three pairs of extremities with antennæ. The posterior pair becomes elongated, and, uniting in front, forms the suctorial organ; the middle pair is greatly diminished in size; and the anterior pair considerably modified as appendages to the head.

In the higher group of Crustacea, the Decapoda, the male and female organs on either side are distinct. The male consist in an assemblage of cæcal follicles, situated in the dorsal region of the animal; the vas deferens terminating upon the basial joint of the posterior pair of legs. During the concurrence of the sexes the vas deferens is everted like the finger of a glove, and performs the office of a temporary intromittent organ. In the female the two ovaries occupy a similar position with the testes of the male, but the oviducts terminate on the basial joint of the third pair of legs in two vulval apertures. When the ova are extruded through these openings they are received by the ciliated appendages of the caudal laminæ, to which they become adherent.

In the Brachiurous, or short-tailed Crustacea, as the Crab, the glandulo-membranous ovaria are connected by means of a transverse bar; the oviducts are expanded, thick and glandular, and near the extremity of each, is a small cæcal pouch, the copulative sac, which serves as a reservoir for the male fluid, and impregnates the ova in their passage along the oviduct. Such is the disposition of the female organs in the Maia Squinado, or Spider Crab. The vulvæ open near the posterior margin of the plastron or belly-plate. In the male, the vas deferens is everted, as in the Decapoda, to constitute a temporary penis. Sometimes a very singular dimidian hermaphrodism is observed among the Crustaceous tribes; on the one side of the animal are situated male, and upon the opposite, female organs. Such instances are occasionally seen in the common lobster, in which case the ova occupy only one side of the tail.

Development of the Ova of Crustacea.

Careful researches have been made upon this subject by Rathke, in the instance of the Astacus fluviatilis, or fresh-water lobster. He has observed that the essential part of the ovum, the germinal vesicle, is produced by the glandular walls of the ovary; that this vesicle is then surrounded by a second membrane, in which the vitellus is formed; that the germinal vesicle disappears in the progress of the ova along the oviducts; and that an opake flattened spot, or cicatricula, is rendered apparent. The manducatory organs and the head are the organs that first appear; then the anus, which is the first part completed; the mouth is very early seen; then the gills, which at this period are external and not invested by a protective covering; and then a small vesicle, which, becoming elongated, constitutes a dorsal vessel, and eventually, by a greater degree of complication, the heart. The vitellus is received into the intestinal canal through the back of the animal, at a point opposite to the principal ganglion of the nervous cord; an arrangement which holds good throughout those animals whose nervous cord is placed upon the ventral aspect of the body.

Arachnoidea.—The spider family is closely allied to crustacea, but in the former the arterial and nervous system are more concentrated; some are aquatic, but the greater number are terrestrial, and breathe air. They differ from insects, in possessing pulmonary sacs in place of tracheæ, in the absence of antennæ, and in having eight legs in place of six. The organs of generation are very similar to those of crustacea, but they are always distinct on the two sides, and not connected by a transverse communication. In the male there are two elongated cæcal tubes, both situated within the abdominal segment of the integument, and two slender and tortuous vasa deferentia which terminate at two small slits, which occupy the under surface of the abdominal segment of the animal, near its anterior border and between the two breathing spiracles. There is no appearance of a distinct penis, and if intromission do actually take place it must be by means of eversion of the vasa deferentia. In the female, as in the Mygale avicularia, or bird-catching spider (a beautiful specimen from the collection of Mr. Langstaff), the ovaries consist of numerous simple cæcal follicles, with oviducts. In considering the generative organs of the earth-worm, where there is no trace of the intromittent organ, we saw developed, from the clitella at the breeding season, two filamentary appendages, that were intended as organs of excitement. We shall now observe analogous organs in the spider. The arachnoidea are remarkable for their insidious, cruel, and destructive habits, and for a thirst after blood, which overcomes even their sexual propensities. It not unfrequently happens that a young and aspiring lover, making his somewhat too forward advances to some old and practised coquette, is immolated at the altar of his love, and, falling a sacrifice to her inordinate voraciousness, is devoured. As a protection to the male in such dangerous negotiation, Nature has provided him with a pair of elongated maxillary palpi, upon the extremity of each of which is situated a small hook, which is intended to serve as a stimulating instrument. Extending to their fullest extent these lengthened members, he advances, cautiously and by slow degrees, towards his inamorata, and directs a series of *tatonnements* towards her vulvæ. At the extremity of each of these exciting organs is an orifice which leads to a glandular sac. The sac gradually becomes extended and swollen, and forms a soft cushion, with which he continues his titillations, and, having effected the object of his visit, betakes himself to his heels with all possible speed. In the female these maxillary palpi terminate by expanded extremities.

The development of the ova of arachnoidea has formed the subject of an admirable quarto volume, by Herault, to whose laborious researches we are indebted for our knowledge upon this subject. The first stages of the process have also occupied the attention of Dr. Rudolph Wagner. He has seen the germinal sac very distinctly, and finds it to disappear after impregnation. The ova are deposited in a cottony web or nidus, and, as if to redeem the character for cruelty of the parent, they are watched by her with the most tender and untiring assiduity until they are hatched. Some species, as the Clotho, forego all nourishment during their watch; and if, perchance, the young do not come forth at their accustomed time, in consequence of the coldness of the weather, the mother, possibly, perishes with hunger. Another species attaches the nidus by threads to the branches of trees, and sits at hand, with maternal solicitude, awaiting the development of her offspring, and is not easily driven from her seat. Herault has observed that the first change which takes place in the ovum is the diffusion of a whitish and opake fluid beneath the chorion. This is the cicatricula, or cambium, which gradually extends and divides into two portions, corresponding with the cephalic and thoracic segments of the embryo; the remainder of the ovum consists of granular vitelline substance. In the next place, the cambium produces the abdominal segment; then the dorsal vessel, the eyes, with the other organs, are formed, the vitelline substance communicating with the alimentary cavity through the back of the animal.

INSECTA.—Throughout the insect tribe, the sexes are distinct upon different individuals; they are diœcious; the males possess testes, vasa deferentia, and sometimes an epididymis, vesiculæ seminales, and a penis with clasping organs at the extremity. This tribe maintains a close alliance with the vegetable kingdom; they are useful to plants by diffusing their fertilising anther-dust, and conveying it from the males to the females in diœcious flowers; while plants, on the other hand, afford to the insects a means of subsistence, a nidus for their ova, and frequently a habitation for themselves and for their offspring. The sexual organs of insects, though constant in ther essential character of being always cæcal sacculi, are extremely variable in their form. Thus, in the genus Scorpio, the testes are simple tubular prolongations; in Clerus, they form flagelliform tufts of cæcal tubuli; in Hydrophilus, they are very numerous and racemose; in Bostrichus, verticillate; in Trichius, radiating and terminating in spherical vesicles; in Anthribus, they resemble two flattened disks with radiated markings, and communicate with a large vesicular dilatation by means of two short ducts; in Semblis, they assume the appearance of a cylinder formed of clustered vesicles; and in the Cetonia aurita, of tubuli expanding at their extremities into flattened circular sacs. In the Lepidoptera, the male organs pursue the same simple type. In the Diptera, there are two simple oblong sacs, two accessory glands, and a common duct. In the Bee, the testes have been compared, from their resemblance, to anthers; indeed, as many as twenty-four different classes and types of the testis alone have been reckoned, from the peculiarity and variety of form which they present.

DUBLIN MEDICAL POLITICS.

To the Editor of THE LANCET.

SIR:—Notwithstanding the few critical remarks in your last number relative to my former communication, I venture to send you my SECOND FAMILIAR EPISTLE, and, I confess, not without some degree of confident expectation, of seeing it in the pages of THE LANCET; I claim this indulgence, not only from your well-known liberality, but also from the principle of common justice, which I am convinced will never be denied to any, by the Editor of that excellent periodical. It would be the height of illiberality and injustice to put forward, against the numerous false *facts*, and false reasonings, and false assumptions, published by the would-be liberals in this city, *as a reply*, the fragment of a reply, necessarily a fragment, contained within the limits of one communication, especially when you append the sanction of your disapproval, so justly esteemed of such weight and influence;—better far for justice, and the development of truth, that those libels had been left without rejoinder, to the consuming power of silence and contempt.

My comments may be anonymous, and so far they may want the additional force of direct personal testimony:—*that* may be a loss to the cause I advocate, and may be urged as an objection by friends placed in the same predicament as myself, but it comes with a strange grace from opponents. Such an accident, however, cannot falsify fact, or distort reasoning and inference:—by these I am content to stand, and I defy their contradiction—not that I am ashamed of my cause, or doubtful of my position, but, I confess, I have more prudence than to plant myself as a target for the shafts of hebdomadal enmity and malice. I did not seek this rencounter:—an assault in my conviction, a false and injurious one (to public and reform interests), has been made, and the valiant authors have not been content with their motion, but must needs attack, with libellous rancour, those who, to say the least, are as honest and as liberal, while they are far more consistent, than themselves; an appeal is made to public opinion,—I am content: but is that appeal to be entirely on one side? Again, then, Sir, I claim the insertion of the continuation of my reply, such as it is, and I promise you I shall not unnecessarily trespass on your indulgence. But, Sir, I doubt much, if the sequel will not prove that *I*, and not my opponents, are really on the same side with the highly-gifted Editor of THE LANCET: were he a witness to the ultra-movement and its authors in this country, I am convinced he would see as much reason and justice for opposing and condemning my familiar epistles, and the cause they embody, as he would have for promoting and seconding the scandalous and unprincipled attempts of the corrupt and profligate Tories, to convert meetings convened for really liberal purposes into chartist uproar and confusion, in order that under such befitting panoply they might for their own objects arrest the march of improvement, and continue their warfare against all liberality and reform. Your obedient servant,

A CONSTANT READER AND SUBSCRIBER.

Dublin, 23rd April, 1840.

FAMILIAR EPISTLE.—No. 2.

Dr. Jacob, I promised you, towards the close of my first familiar epistle, I would in my next explain and demonstrate why *the Dublin Medical Press* was spurned and rejected by the great majority of the medical profession, and was driven entirely from the metropolis to procure a doubtful and scanty existence among a small minority of the remote rural practitioners. I hasten to redeem that promise, as I make no doubt you are

anxious for the solution of an enigma that has entirely puzzled the Œdipean powers of your wit, your honesty, and your consistency, all various though they be.

The Medical Press is *not the organ of the profession in Ireland:* in its pages an undue, an unfounded, an absurd importance is given to a few individuals, whose deeds and influence are exaggerated beyond measure,—speeches being put into their mouths, and acts ascribed to them, that were neither ever practised, nor uttered, while the *suppressio veri*, and even the *assertio falsi*, are the characteristics of the treatment, which the vast majority of your medical brethren receive in its columns; simply because they are guilty of the heinous offence of differing in opinion from the learned editors, and of possessing too much of the spirit of independence to suffer themselves to be tied neck and heels to the triumphant car of Drs. Jacob and Maunsell. Do *they* deny this? Bear witness, Messrs. Read, Tagert, Alcock, Beatty, Murphy, and several others, who have been driven to the expense and annoyance of publishing pamphlets, to wipe away from their reputations, dearer than life, the misrepresentations of *the Medical Press*. —*The Medical Press is not the medium of free, independent, and intelligent discussion:* it is but the vehicle of a selfish few, seeking, *per fas aut nefas*, their own selfish aggrandizement, whose lucubrations (calculated to deceive those remote from the metropolis) monopolise entirely its columns, which are entirely shut against those who differ in opinion, or would seek the promotion of a great public principle, from the highest of all motives—that of the general good. *The Medical Press* possesses *a sad lack of talent:* many of its leaders betray such a poverty of intellect, such scanty knowledge, such low vulgarity, and even such faulty grammar, that it is calculated to shed disgrace rather than lustre upon the profession, whose sole organ it presumes to be:—this, however, (though a cause of just complaint in a Journal that lays claim to the high and important office of directing the minds of an educated public into those channels in which alone the stream of intellect should bear on "the tenor of its course,") would have been forgiven to the Press, had it possessed the better, and, alas! rarer talent of *common honesty:* the want of honesty in a historian is a damning defect, that admits of no palliation. Neither is the *Medical Press the organ of Reform*. Nay, stare not, start not, Drs. Jacob and Maunsell! I protest this is one of its defects, that I, as a reformer, feel most acutely, and condemn most warmly. It does not advocate the *cause* of real reform,—it does not represent the *principle* of real reform. No, its object, its scope, its exertion, extends not a whit beyond, nor does it represent anything else than, *agitation*, mere profligate agitation, founded in selfishness, growing in selfishness, and looking forward to selfish reward. Thus the words of its cry and preaching ever are, "Meet, unite, agitate, petition, but not one word, as you love me, about details: no, no; that will only excite disunion, and injure our cause, which is, and will continue most prosperous, as long as you follow my advice." Now what is the meaning of all this crafty froth? Simply this, Drs. Jacob and Maunsell; "Let us kick up a devil of a dust—let us keep the public mind in a state of high but ignorant excitement—let us wield that excitement, and keep it in connection with *our* names and our persons—let us take the aid of all the ninnies that will help us, and *submit to* us; but let us write down any one who will trouble us with details, or presume to think for himself; in a word, let us get up the steam to that point, and that point alone, that will drive the Government into the appointment of a board, and commissioners, and understrappers, all paid, in order that *we* shall come in for some of the fat things, for which *we* shall have so strong a claim, inasmuch as *we* shall have contributed so extensively by *our* agitation to create them." Avoid details, indeed! As if the whole difficulty did not exist in the details,—for where is the man of common sense who is opposed to the grand principle of *bonâ fide* medical reform? There is no such man in existence.

The advice to avoid details, however, is not without wisdom, for, once or twice, a *detailed* plan, emanating from the same valuable fountain from which *the Press* derives its springs, was ventured upon, and promulgated; and a pretty kettle of fish, Drs. Jacob and Maunsell, you made of your details. What were they? Modest and simple enough! "Destroy, virtually, if not actually, all other institutions, save only *the Irish College of Surgeons* (at this time you reigned supreme there): make a whip of five guineas a-head on all medical and surgical practitioners in Ireland, and distribute to them, as *quid pro quo*, a shower of parchment licences. On *formal* examination, by an act of grace, let all these constitute *the faculty of Ireland*, and be governed by a *council* of which, no doubt, *we*, and a dozen at least of our friends and creatures, shall be elected members, in common gratitude, if from no other cause; only let us and a few more become the first centre and nucleus of this council, and we shall submit to any form of popular election, for one half of the council, every third, second, or even every year; let this council have supreme authority, and meet in the College of Surgeons; *we* shall then be able nicely and simply to *gag* the profession, and give ourselves the *entire monopoly* in *licensing* and *teaching*." This was your celebrated venture on a detailed plan of medical reform,—for not acceding to which, your brother members, and the Col-

lege of Physicians, have incurred so much odium and scurrility in the pages of the *Press*. The same way about *union:* the *Press* cries Unite, unite; but the moment a large number of gentlemen unite for healthier objects, and by healthier means,—the moment they attempt an honest and honourable union, by which, by the quick, frequent, and personal interchange of thought, they hope to develop a grand moral influence, and perhaps bring forth some scheme of large, liberal and *practicable* reform, that might meet the public wants, and might dovetail fairly and honestly with all parties, by which all parties might be benefited (the great obstacle to which is the jealous distance at which different members of the profession stand, that distance confirming prejudices, and marshalling them in opposite parties), that moment in walks *the Press*, and with might and main endeavours (though with impotent result) to play the part of the Demon of Discord, and, by scandal and misrepresentation, to excite the bitterness of disunion and ill-will:—"No, gentlemen, have no such association, or we will give you a bad name; that is not what *we* preach; *we* only want a union that will play second fiddle *to us*, and give *us* that personal importance and leadership that may finally force Lord Normanby to make us conductors of her Majesty's new reform concerts in Ireland!"

No, Drs. Jacob and Maunsell, however self-interest may blind you, however vanity and self-esteem may puff you up, believe me, yours are not the master minds, nor do you possess in any one department the qualifications required to lead a great moral revolution of honourable, educated, and discriminating gentlemen. Although a cunning desire for profitable *speculation* may have convinced you that you can see how the cat jumps, and although, *pari passu*, you yourselves have altogether eclipsed in agility of movement the admired "*Jim Crow*," be assured you have mistaken your position; and if you would look forward to success, you must withdraw your great abilities from their present erroneous stage, and confine them to the more appropriate sphere of agitating among citizens and freemen for the election of poor-law guardians, or some of the offices under the New Corporation Act: there, you may succeed; there, the constituencies are not always particular about their leader, provided they possess the requisite which is so remarkable among your brilliant qualifications, an indefatigable power of agitation; but, depend upon it, you only mar the cause of *reform*; you never can, and never shall, lead the medical profession of Ireland: they have not a full faith in the calibre of your genius (which is miserably below par), a firm reliance on the honesty of your purpose, implicit confidence in the prudence of your conduct, and yet *all these* are requisite to give efficient power to any great captain, in any great cause. Think you for one moment that men who have only *attempted* to conduct the affairs of a class of young and ignorant pupils whom they have been deputed to instruct, think you that *they* can, or ought to lead and manage the mighty intellect, the multitudinous affairs, the many and motley interests, of the world of medicine in Ireland? never was there greater presumption!

Throwing your intellect overboard, then, as the thing of least value in the storm, think you, Drs. Jacob and Maunsell, that we have any faith in either of you as *honest reformers*? Not a bit of it! What! are the medical men of Ireland to be "written down such asses," as to be supposed capable of harbouring for a moment so absurd, so outrageous a doctrine as this, that the *orgies* of an *Orange-lodge* in Ireland form a fitting school in which to expand the intellect, liberalise the mind, enlarge the heart and feelings, and to acquire, at once, a well-founded knowledge of, and a sincere attachment to, liberal institutions, together with the wisdom and prudence that are necessary to promote such weighty objects? And yet, let me ask, where else did Dr. Maunsell assume his reform doctorate? Then, as to yourself, Dr. Jacob, what evidence of sincere and consistent attachment have *you* afforded to that cause, of which, because it suits you, you are now so noisy an advocate, and of which you would be at once the only true apostle, and eke the martyr? Let us take a bird's-eye view of your career, of course that public career which would ambitiously affect the interests of us all; *for* with Dr. Jacob behind the scenes, in domestic life, I have nothing to do. I shall put out of sight all your Orange-tinged dabblings in general politics, and building of chapels, and voting, &c., some features of which might amuse and instruct the public, and shall confine myself, in this epistle, to the sole object of recalling to your recollection (which seems to partake as much of the *non mi ricordo* species as you suppose that of your brethren to do) the consistent figure you have cut in your career of medical politician. You started at first as a medical teacher (I speak of that period when first your mole-like efforts began to attract notice). You were demonstrator to Dr. Macartney in the University. I shall not tarry to contrast the respectful demeanour of your conduct towards that admirable man, with your after exhibitions in the College of Surgeons, when your interests there took another turn; but shall simply ask you, what was then the grand object of your exertions, oral and printed? Why, this. To extol the merits and the advantages of the university school, at the expense of all other schools whatsoever, whether in-

corporate or private! After some time you yourself are a speculator, and a "heavy holder" in private school-stock in *Park-street*. Your private interests are changed, and forthwith your public opinions undergo acute revolutionary action; consequently all your energies and exertions are thrown into a new channel. Now, the language of encomium is exhausted. Now handbills and circulars fly among students and the public, loudly lauding the great, the inestimable value that resides in private schools alone, and in *Park-street* in particular; and pointing out many ingenious devices by which students of the tenderest years may be enabled conveniently to drive a coach-and-six through acts-of-parliament and charters, whether of university or college. After another interval we find your unceasing intrigues and exertions worming you into a professorship in the *Dublin College of Surgeons*; and, *hrigh presto!* all is changed! With the rapidity of lightning, the weird magician concentrates before an astonished and applauding audience all the excellencies that the heart of man ever devised. Where? In *the school* of the Royal College of Surgeons aforesaid! We soon find you—having about this time embarked also in a joint-stock hospital,—in angry personal opposition with your present patronising leviathan, Mr. Carmichael; defending the slavish system of apprenticeship; and advocating all the other abuses in the college, in a series of letters in THE LANCET, where, still, the more than Greek anthology of your polite literature remains for the undying admiration of future generations of the lovers of liberal policy, consistent conduct, and polite accomplishment. For several years you are the sole and supreme manager of the college; your unceasing perseverance, animated by the most constant of human springs of action, self-interest, having wearied out all permanent opposition. During this period, the characteristics of your policy, if a thing so vacillating and unstable can deserve the name, were simply twofold: on the one hand, to make and continue the college as much as possible a close and rotten borough, which would thus be more easily managed; and, on the other, to institute innumerable harassing regulations, which would operate as restrictions upon free-trade in teaching in general, and as protecting duties in favour of that particular school in the college, in which the *liberal* Dr. Jacob had so strong a personal interest. With the latter view, we have registrations, and returns, and inspections, without end; examinations quarterly and half-yearly; non-reciprocity in the certificate-trade, &c. &c. &c.; all of which, excepting the latter, have been one after another discontinued, according as they have been found by experience inoperative of the result for which cunning had devised them. Nor did this long career pass through its phases, without attracting indignation and reproof. Many and many was the well-aimed shaft that sped its way from the well-practised hand of the Editor of THE LANCET, and others, against this redoubtable and undoubted affair of jobbery and corruption; but such was the sevenfold *brass* in which this Ajax was ensconced, that not one of them all gave any evidence of penetration, by the exhibition of the slightest moral sensibility!

Your next exhibition, at least after several ineffectual efforts in the College to be sent over with only a few picked and trusty attendants (as if any suppressed evidence could escape the lynx-eye of Mr. Warburton), is before the medical committee of the House of Commons, where you figure as an unwilling witness, floundering in the meshes of College corporation jobbery; your evidence is on record, and speaks for itself. Let any one who may have, at once, a fancy for the loathsome and the curious, explore these learned tomes, and if he can find, let him hold up to public admiration, any glimmering even of that great reform light which now, forsooth, would blaze forth and lighten the gentiles of the medical world! Have you, too, Dr. Jacob, forgotten, what must be fresh in the recollection of all your auditors, the triumphant tone of your declamatory harangues upon your return, when you declared you had "foiled *auld* Warburton and his tail?" Aye, and from that college you defied him, for that you had convinced him, —against his will, in spite of the poison instilled into him by the blackguard informers (thus you styled reformers in former days), who were your "enemies, and the enemies of the College; aye, and in despite of his own radical predilections,—that every excellence dwelled in the College-square policy, which you would, therefore, press upon the body with redoubled confidence and energy—which would triumph in spite, aye, and in the teeth, of *crabbed* auld Warburton, and wicked Wakley," both of whom you scorned and defied. At that time, to be sure, you did not think reform inevitable: you had some hope, from the expected return to power of the Tories, that you would be enabled to wallow some time longer in Tory jobbing; indeed, you had the candour to avow it at the time.

The next remarkable era in your motley career of public life, is that which presents you an active, bustling, forward, and confident candidate for the chair of *Anatomy* in the *University*. Your coadjutor, Mr. Harrison, however, is preferred before you; and this humiliating fact lays the foundation in your fecundating brain of a double enmity, against him, on the one hand, and the

whole University on the other: *hinc illæ lacrymæ*, which you have so often wept over the corruptions of *Trinity*,—tears which, no one doubts, would never have descended "the leathern cheeks" of this grief-struck deer of medical reform, had the *University* deigned to deck her laurels upon his august brow. No, no, the giant of corruption would have lived and flourished; liberality would have pined in slavery; the cause of reform would never have found its heroic vindicater and avenger in this new-born, though pigmy David, whose eloquence and whose exertions would assuredly have returned once more to the defence of those opinions and those doctrines (once more congenial to his interests) which he advocated at his first start in life, when he was Dr. Macartney's demonstrator. Well; your motto be *tempora mutantur*, and *nos mutamur in illis*.

The preceding sketch, which falls far short of the great original, might satisfy even you, Dr. Jacob, as it will satisfy the whole profession, that that original is justly viewed with doubt and suspicion by all genuine reformers (as well as the high-minded of all parties), as one who in his public career has disregarded all decent consistency, who has paid no attention to the *principle* involved in the cause he advocates, whose sole stimulus to action has been self, and therefore whose co-operation and alliance cannot be reckoned on one hour longer than it will subserve that peculiar cause which is most dear to him; and even whose sincerity at this moment cannot be depended on.

ALETHES.

Dublin, April, 1840.
United Medical Club, Dawson-street.

ON THE

DEPLETING AND STIMULATING

METHODS OF TREATING

TYPHUS FEVER.

To the Editor of THE LANCET.

SIR:—It appears to me that during the last ten or fifteen years the minds of general practitioners, and young men coming forward in the medical profession, have been very much confused by the variety of opinions held by eminent physicians, as to the treatment and pathology of various diseases, particularly those called malignant. It is well known that one class of practitioners say, fever is essentially inflammatory, and take blood on all occasions where the excitement is great. Another class hold the very opposite opinion, and say, fevers are at all times liable to assume a typhoid type, and if you want to serve your patient you must not bleed, as by doing so you will reduce his strength, and take from the system a quantity of vital fluid, which would ultimately be necesary to keep him from sinking.

Having seen a great number of cases of the worst kind of typhus fever in Belfast, Dublin, Edinburgh, and London, and having seen all kinds of treatment tried with nearly the same average success, I was at a loss to account for such contradictory results. I had always heard the subject reasoned on in a mathematical manner, and, of course, expected precise consequences to given premises, viz., if (as one party say) you have ten cases of typhus fever, and don't bleed, you are sure to lose the half of them; but if you do bleed, you will, to a certainty, save nine of them. The advocates of the other system make the same calculations with the same confidence as to the results. To my surprise I found the one party nearly as successful as the other, and the most fortunate hospital physicians were those who adopted a mixed kind of treatment, or (as Dr. Graham, of Edinburgh, advised us to do, when we were puzzled in our diagnosis,) "treated the symptoms as they occurred, attacking the most prominent first."

As an illustration of the glorious uncertainty of prejudiced views, either for or against bleeding, I shall mention a case which occurred in the Edinburgh Infirmary, in 1828 or 1829. Dr. Duncan (author of the "Edinburgh Dispensatory," and then Editor of the "Edinburgh Medical and Surgical Journal,") was, at the time, attending and giving clinical lectures. The patient was admitted evidently labouring under the worst symptoms of typhus fever; the debility was extreme, accompanied with low muttering delirium, difficulty in deglutition, sordes upon the tongue and teeth, and a few small petechial spots upon the skin. He was ordered wine, with aperients, and the usual remedies; in the course of a day or two the brain changed from that state, which the Doctor called congested, to what he considered to be active inflammation. What was to be done? If we don't bleed this man he will die of inflammation of the brain; and if we don't give him wine he will sink from the effects of typhus fever. To our surprise the Doctor determined to try both. The man was bled from the arm, and the quantity of wine increased. The next day his head appeared better, and the fever about the same. Leeches were applied to his temples and behind his ears. The wine was ordered to be continued, and if necessary increased. The following day the head was better, and the fever less; the sordes began to disappear, and with them the fever. The man became convalescent, and was able to leave the hospital *sooner* than others who had not been so severely

affected, and had been merely treated with salines and aperients. It strikes me, that in the above case the disordered state of the blood was the cause of the deranged functions of the brain, and that the bleeding, in place of inducing dangerous debility, made room for an equal quantity of wine and water, or some other fluid. It is much to be wished that some lecturer would take the trouble to concentrate the observations and experiments of M. Magendie, Dr. M. Hall, and others, upon the subject of the state of the blood in various diseases, the effects of blood-letting, of medicines (wine included), and of the absorption of deranged secretions from the liver, kidneys, &c. &c., upon the blood. There can be no doubt but that the system of bleeding, largely accompanied by evacuating and antiphlogistic remedies, has been carried too far; so, also, has the stimulating plan; and very often natural strength of constitution has contributed more towards cure than the treatment adopted by either party. The advocates for reserving the vital fluid, forget there must be a great difference in the quality of blood in a state of health and a state of disease—that what is vital in the one might be vicious, nay, even poisonous, in the other, as has been observed by Dr. Hall and others, in cases of jaundice and suppression of urine. If this be correct, the blood in place of supporting the strength may be doing harm, by causing functional derangements in the brain, lungs, liver, &c., and thereby keeping up the very state which you want to alter. I consider the deficiency caused by the loss of a pint of blood would not be badly made up for, in such cases, by giving as much barley-water, or toast in water, as the patient chose to take, and, if necessary, occasionally a cupful of mutton-broth or beef-tea. I am also fully persuaded, that what Dr. Hall calls trial-bleedings might often be very usefully adopted. In the above remarks I did not consider it necessary to say any thing about the general treatment, diet, &c., as all are aware of the necessity of removing morbid secretions as soon as they are formed. My object is merely to draw attention to the subject, and not to claim any originality of thought or observation, as I know many practitioners who entertain the same views.

I hope the importance of the subject will be a sufficient excuse for the length of this letter. I remain, Sir, your most obedient servant,

WILLIAM SIMPSON.

110, Guildford-street, April 9, 1840.

STIMULANT INJECTIONS IN THE EARLY STAGES OF GONORRHŒA.

To the Editor of THE LANCET.

SIR:—I unfortunately mislaid the following communication, which I prepared for THE LANCET a few weeks ago. As, however, the principal subject is one of no fleeting and temporary interest, you may, perhaps, be willing to insert it in your columns, notwithstanding its tardy appearance. I am, Sir, your obedient servant,

HENRY COLES.

Cheltenham, April 9, 1840.

SIR:—In a late number of your periodical appeared an interesting paper on the utility of weak and very frequent injections of sulphate of zinc in gonorrhœa. The efficacy of weak sulphate of zinc injections in the early stages of that disease, has been frequently taught by practitioners of acknowledged experience and ability; but the frequency with which they are to be repeated, is, I think, a novel recommendation. If a practitioner had himself for a patient, and had plenty of leisure, nothing could surpass the excellence of the plan recommended; but I fear, in the majority of instances, it would be found less practicable than other modes, which, involving the same principle, vary in the details.

On several grounds it is objectionable to trust to patients to give themselves injections, which, in almost all instances, must be a necessary part of the plan proposed by your correspondent. There is a prevailing prejudice against them, which often induces a patient, who may leave you with the fairest promises, to neglect them entirely, or use them very inefficiently. Besides which, my experience has taught me that a patient must have great natural adroitness, or be a veteran in claps, to enable him to inject the urethra so effectually as to derive the full benefit from the practice. My experience has also taught me, that a practitioner has it in his power to arrest gonorrhœa in its early stage, by thoroughly injecting the urethra with a weak solution of sulphate of zinc two or three times a day; but to effect this, many syringefuls of solution should be employed each time. Since the repeated introduction of the ill-adapted nozzle of the syringe, within the inflamed urethral orifice is both painful and inconvenient, I contrived an instrument to obviate this evil, the construction of which I will endeavour to describe.

Cut off four or five inches from the end of a moderate-sized male flexible catheter, whose calibre will accurately admit about half the length of the nozzle of your syringe. Insert the nozzle of the syringe, and

fill up the space between the top of the catheter and the shoulder of the syringe with sealing-wax. The sealing-wax will incorporate itself with the material of the catheter, and adhere inseparably, while it will form an exact cast of the nozzle and shoulder of the syringe, and, consequently, fit it accurately. The advantages of this instrument are obvious; it can be inserted, with the least possible irritation, to any distance along the urethra (to suit the theory of the operator as to the principal seat of the disease), and there held steadily. The lips of the urethra can be compressed on it so as to retain the injection much more effectually than on the nozzle of the syringe, and with much less irritation. A dozen syringefuls of the injection can be employed with as little inconvenience as one, since the pipe of the syringe is inserted each time in the tube, which remains all the while motionless in the urethra. As the syringe and tube fit so nicely, when the piston is depressed, the urethra becomes distended with the fluid, and not a drop escapes until the nozzle be withdrawn, when the elasticity of the urethra forces the injection back through the tube.

I generally have two bottles of injection in use, one containing only distilled water, the other containing two grains of sulphate of zinc to the ounce. I commence by pouring equal parts into a gallipot, and apportion the quantities afterwards according to the irritability of the urethra. I find the proper strength usually to lie between one and two grains, which I can best hit by adopting this plan of two bottles, and if I require it stronger, I avail myself of a third bottle, containing four grains to the ounce, which I employ in the same manner.

I have also frequently used a similar tube as a female catheter, and can confidently affirm, that for all the circumstances in which such an instrument is required, I know of none so manageable and universally applicable as this. The tube should be held between the thumb and middle finger, while the fore finger covers the orifice at the bulbous extremity, and presses it onwards, by means of which it is passed gently and firmly, and the bed-clothes escape the least soil, since the stream of urine is completely under the control of the operator. That I may not be behindhand in that solemn medical trifling so prevalent now-a-days, I have designated this instrument *the Gynandric Tube*, thereby intending to intimate that its utility extends to either sex.

MEZEREON, AND ITS SUBSTITUTES.

To the Editor of THE LANCET.

SIR:—I observe a very curious assertion in a paper by Dr. Sigmond, in the last published part of the "Transactions of the Royal Medico-Botanical Society," which is calculated to lead the student in materia medica into error. The passage is in an article on the bark of the ulmus campestris, and is as follows:—

"If we should be enabled to find in our islands substitutes for mezereon, for sarsaparilla, and for cinchona bark, we shall be conferring on our fellow countrymen a benefit which will be appreciated by all those who are capable of judging of the importance of the objects we have in view."

This conditional proposition certainly implies that the Daphne mezereum is not indigenous, and that we have no indigenous substitute for it. Now, it does appear in the works of Smith, Hooker, Lindley, and many others, that the D. mezereum is indigenous, and even if it were not so we have the D. laureola, whose sensible properties are very similar, and whose medicinal virtues have long been considered to be nearly, if not quite, equal to its congener. I have repeatedly employed the root of the D. mezereum, grown in gardens in this country, and gathered by myself. I am very much inclined to believe, that a considerable proportion of what is sold in the market as mezereon is the Daphne laureola.

Had the remark which occasioned this paper issued from a less important source, I might not have thought it worth while to notice it, but coming from the Professor of a "Royal Society," and under the sanction of the learned and scientific council of the society, it did appear to me to demand attention, especially as it is acknowledged that such information as I have now given is a public benefit. I am only surprised that such obvious truths should at this day require to be stated in a periodical medical publication. I am, Sir, your's respectfully,

JOSEPH HOULTON.

London, May 27, 1840.

AMPUTATION OF FINGERS.

To the Editor of THE LANCET.

SIR:—In amputating a finger, or part thereof, in cases of accident, it seems to be a matter of little import to many surgeons whether the operation be performed at a joint, whether the articulating extremity be removed, or whether the ablation be made in the continuity of a bone; while others contend that the removal should always take place at a joint, because a round articular surface is thus presented to the parts left for its covering, instead of the sharp edges of a bone produced by amputation in its continuity. Before coming to a conclusion upon this subject, let us first glance at the anatomical structure of the fingers, and then direct our attention to the practical results derivable from each plan.

The fingers are formed each of three phalanges, somewhat convex on their dorsal, and slightly concave on their palmar surfaces; on the dorsal aspect is expanded and fixed the tendon of the extensor muscle, a small quantity of cellular tissue, and the integument covered near the extremity by the nail. Fixed to the palmar surface is a fibrous sheath, lined by synovial membrane reflected from the two flexor tendons which it contains; one of these tendons is inserted into the tubercle of the third phalanx, whilst the other held close in its place by a fibrous band is implanted by two slips, one on each side, into the second phalanx, at about its middle; thus much of the anatomy of the parts will be sufficient to explain my views.

The following table will show the results of the several plans of operation performed on twenty-seven consecutive cases:—

Of Eleven Amputations performed at Joints.

1 healed by the first intention;
5 were followed by abscess in the sheaths of the tendons;
2 were attacked by erysipelas;
3 healed by the second intention.

Of Ten Amputated at Joints, and Cartilage afterwards removed.

7 healed by the first intention;
1 attacked by erysipelas;
2 healed by second intention.

Of Six removed in the continuity of the Bone.

5 healed by the first intention;
1 healed by the second intention.

Let us now examine the curative process in the stump in each operation; in that in which the end of the bone, with its synovial membrane, is removed, or in which the amputation is performed in its continuity, we have certainly a sharp surface of bone projecting against its coverings, but these can generally be left of length sufficient to form a fair and proper investment, and, that too, less likely to be disturbed, by being in contact with a smooth cut bone, than by being opposed to a synovial membrane, which must change its character before it can unite with the parts left for its protection.

This change in the synovial covering is frequently accompanied by inflammation and suppuration of the synovial linings of the sheaths, and coverings of the flexor tendons; and this will explain the origin of the troublesome abscesses we occasionally find in the palm of the hand supervening upon amputation of a finger, and requiring free and deep incisions for the dislodgement of their contents. I have oftentimes pressed from the face of the stump the matter so collected, and passed a director into the open mouth of the sheath, for the purpose of establishing a counter opening.

It may be argued, that the amputation at a joint is a more elegant proceeding, and more rapid in its performance, than that finished by removing the articular cartilage, or performed in the continuity of a bone. This may be all very well for those who can afford to wait many weeks for a cure, in preference to submitting to a trifling additional amount of present annoyance, but will not suit the general class of Hospital patients, who must support their friends or families by the sweat of their brow, and to whom a speedy cure is of far greater importance than the tardy results of an operation, however dexterously performed. I am, Sir, your most obedient servant,

G. A. A.

Liverpool, Northern Hospital,
May 7th, 1840.

FATAL CONSEQUENCES OF THE EFFLUVIUM IN METROPOLITAN GRAVE-YARDS.

We have been favoured with a communication from Mr. J. C. Atkinson, Surgeon, of Romney Terrace, Westminster, on the health of the poorer inhabitants of the metropolis, as it is affected by a want of cleanliness and free ventilation in the districts which they frequent. His attention has been particularly called to this subject by a perusal of Mr. Walker's "excellent and interesting 'Gatherings from Grave-yards.'" Mr. Atkinson, in his remarks, dwells on the necessity for an extensive purification of the localities in question; and in the course of his observations on the effects of animal and vegetable putridity, relates the following cases as having come to his knowledge:—

William Green, a grave-digger, while employed in his vocation in the churchyard of St. Margaret's, Westminster, was suddenly seized with faintness, excessive chilliness, giddiness, and inability to move his limbs. He was seen to fall, and was immediately taken to a public-house, where warm beer, brandy, and other stimulants were given to him. Slight reaction seemed to take place. He was removed home, and his usual medical attendant was sent for. Carbonate of ammonia, æther, and other stimulants were again resorted to, with but little hope of his recovery. The poor fellow's impression was that "he should never leave his bed alive; he was struck with death." He was, subsequently, removed to the hospital, where he died in a few days, with all the symptoms of typhus gravior, in its last stage:—this I learnt from the medical attendant. No hope was entertained, from the first, of his recovery.

Mr. B., the medical attendant, was seized with precisely the same symptoms. Erysipelas supervened, and the disease put on the same typhoid character; the tongue foul; the mouth and gums coated; respiration laborious; the urine depositing a black and fœtid sediment; the stools dark and offensive; pulse rapid and fluttering; coldness of extremities, &c.; pain over the whole surface of the body. He was attended by me; I apprehended from the first a fatal result; he died four days after the decease of the grave-digger.

The fatal effects of this miasm did not end here. The servant, a sickly-looking girl, of leuco-phlegmatic temperament, was seized on the day after the death of her master with giddiness, and loss of motion in her lower extremities; incoherency of language; much vomiting of a dark, highly offensive fluid; tongue foul, &c. With the exception of the erysipelatous appearance of the face, the symptoms varied but little from those of her master, and she sank in a few days. They were both in a depressed state, as regards the vital power.

There can be no doubt of the fact that the miasm or effluvium from the grave was the cause of the death of these three individuals. The disease appeared from the first to be perfectly unmanageable; its cause, the morbid matter received into the constitution, which it was impossible for medical art to remove. No particular organ seemed to be affected; no essential part, as it were, attacked, but the general system, the whole animal economy, had received a shock which paralysed the influence of nature, in every effort to gain an ascendancy; so uncontrollable a power had this miasm produced on the frame, that it progressed, heedless of aught that was done to arrest the fatal results. The total inefficiency in the three cases, of all remedial means, showed the great power of the virus, or miasm, over the animal economy, from the commencement of the attack.

I see mention made of a fatal occurrence in Aldgate church-yard, where two lives were lost, from the effluvium of a grave, used for the wholesale interment of the poor; a similar dangerous nuisance has existed in Bishopsgate church-yard, where it is said a common receptacle is kept open for the interment of paupers: such glaring facts call aloud for the interference of the Legislature, and demand attention from every thinking inhabitant of this metropolis.

VACCINATION DURING SMALL-POX.—SECONDARY SMALL-POX.

To the Editor of THE LANCET.

SIR:—Thinking that the following cases, which occurred in my practice as surgeon to the S Division of the Metropolitan Police Force, may be interesting at the present moment, I send them to you for insertion, and am, Sir, your most obedient servant,

JOSEPH CURTIS, M.R.C.S.

Camden Town, May 25, 1840.

CASE 1, Nov. 15, 1835. I was requested to visit —— Carter, P. C. 140, who appeared to be labouring under a bilious attack. On the 17th, small-pox eruption appeared, and ran the usual course in a confluent form; the patient, however, recovered, and returned to his duty Dec. 27th following. He had not been vaccinated.

This man had a child, about three years old, who had not been vaccinated. As soon as I found that he was labouring under small-pox, I desired his wife to lose no time in getting the child vaccinated at the Small-pox Hospital. However, being very much engaged, and having no one to attend to her husband, she neglected this injunction, until one morning, upon seeing an eruption on the child's skin, she hurried off to the hospital and had it done. It was now too late to prevent the small-pox. The child was covered with pustules from head to foot, but in a distinct form: the constitutional symptoms were hardly perceptible. It ran about the room, and ate and drank as usual; the only medicine it took was one dose of castor oil.

The vaccine pustule ran the usual course for a few days, and was then lost among the small-pox eruptions.

CASE 2, Dec. 5, 1835. I was requested to see H. Bushley, P. C. 97, who appeared to be labouring under fever. On the 7th, the small-pox eruption came out.

I ascertained, by inquiry, that a week or two previously he had been to see the body of his sister who died of small-pox; not being protected by vaccination he afterwards became alarmed, and on the 4th, the day before I saw him, was vaccinated. The small-pox, in a confluent form, ran its course, as did the vaccine pustule. On the 17th it was difficult to say precisely which was the vaccine pustule. The small-pox appeared to me much modified by the vaccination; the constitutional symptoms were never so bad as is commonly the case in confluent small-pox. The patient, however, is scarred all over. He returned to his duty Jan. 18.

CASE 3, Dec. 10, 1835. James Thompson, P.C. 153, residing in the section-house in which Carter lived, and being marked by small-pox, from which he had suffered some time back, was attacked with symptoms of an ordinary cold. On the 13th, the small-pox eruption made its appearance, but died off on the 16th. On the 19th he returned to his duty.

Case 4, Aug. 20, 1836. J. Harrod, P.C. 179, was attacked with small-pox, having been previously vaccinated. He had small-pox in the confluent form, but unaccompanied by the severe fever common in these cases.

30. The scabs have formed on the face, and the patient is convalescent. He was very much marked on his recovery.

Case 5.—In August, 1836, a livery-stable keeper, whose family, consisting of his wife and three children, I was in the habit of attending, not being able to keep a permanent servant, employed a girl to come during the day to do the work of the house, and nurse the children. This girl had several brothers and sisters, all of whom, at this time, as well as himself, had had the small-pox, having been vaccinated in their infancy. They all had the disease so slight, that no medical man was employed. The livery-stable keeper having a prejudice against vaccination, none of his children had been protected by that operation. The eldest, a boy about five years old, caught the small-pox, but had it so slightly, that for some days I doubted if it were not the chicken-pox. He was not confined to his bed. The second child, about two years younger, took the complaint next, was seriously ill, and, in fact, in much danger of its life. The third, an infant, was attacked with the complaint last, and died.

Shortly after this, I was called to attend the youngest brother of the servant girl, (whom I suppose to have conveyed the small-pox to her own family,) an infant about ten or eleven months old. This child had been vaccinated, and had had the small-pox at the same time with the rest of the family. When I saw him I examined his arm, and saw the mark left by the vaccination. He had likewise red spots, left by the small-pox; and now had a second eruption of small-pox, five weeks after the first. This last attack was rather worse than the first; but never so bad as to make me think the child's life in danger. It turned about the fifth day; as in common with small-pox after vaccination.

Case 6.—At this period I attended a boy about seven years of age, who lived opposite the last-mentioned family. He was much pitted with the small-pox, and now had a second attack of it in its worst form. He died.

There are, I believe, few persons in the present day, who would contend that there exists a *never-failing* protection against small-pox. From my own experience, I should say that small-pox may occasionally occur twice in the same individual, and that it sometimes succeeds vaccination. I believe it to ensue more frequently after vaccination than after the first occurrence of small-pox, but then it is milder in its form than when it attacks after a preceding small-pox. I have seen many instances of small-pox after vaccination, but they were seldom severe enough to confine the patient to bed for more than a day or two; I have likewise seen some cases of secondary small-pox, and have found more deaths occur among the latter than among the former.

In the Small-pox Hospital, I believe that as large a proportion of those who have taken small-pox after vaccination die, as of those who catch it a second time; but it must be remembered, that none are received there unless they be seriously ill, consequently the medical officers do not see the numerous trifling cases of small-pox after vaccination, that occur in private practice.

The foregoing cases tend to show, that small-pox is very much modified by vaccination, even when the patient is vaccinated after he has contracted the disease, and that small-pox, communicated by a person attacked after vaccination, is very mild, but increases in severity as it passes through persons who are unprotected.

With respect to the treatment of small-pox, I have said nothing, as I have little that is new to advance. My plan is to administer mild aperients, with sudorifics, and to have the body sponged with warm water. This last I find exceedingly useful among the poor, many of whom have a prejudice, that the clothes of a patient, labouring under small-pox, should never be changed after the eruption makes its appearance, until it turns, but I have frequently succeeded in inducing them to lift up the clothes and sponge the body, when they would, on no account, take them off.

EXTIRPATION OF THE EYE-BALL

IN CASES OF

FUNGOID DISEASE.

By Simeon Bullen, *Esq., formerly Surgeon to the Wells Med. and Surg. Institution.*

Mr. Lawrence, in his treatise on diseases of the eye, condemns, as objectionable, the practice recommended by Scarpa of extirpating the eye, in cases in which fungoid or other tumours not of a malignant form, grow from its tunics. With a view, principally, of directing attention to this important question in practical surgery, which has been disputed by authority so high, I beg to give a brief detail of a case very similar to those related by Scarpa, in which I felt the necessity of extirpating the eye. Although I have great confidence in Mr. Lawrence's opinions generally on practical surgery, still my observations, on diseases of this description, impress me with a belief, that Scarpa's views on this subject are essentially correct and sound; and I fully adopt his conclusion that

fungous tumours from the anterior part of the eye, although indolent and benign at the commencement, often become, when left to themselves, or empirically treated, of a malignant or cancerous character, and that therefore it is important to extirpate in an early stage of the disease. The cases which Mr. Lawrence quotes from Sir A. Cooper's and Mr. Travers' publications do not appear to me to differ materially from those referred to by Scarpa. I have just seen Mr. Tyrrell's work on the eye, which issued from the press during the last week; it contains remarks on fungoid diseases of the eye; and I would certainly adopt his recommendations with respect to medical treatment, wherever the case admits of the necessary delay; but I believe it to be an unquestionably good rule in surgery, that after failure in medical treatment to arrest the progress of fungoid disease in the eye, wherever a doubt exists as regards its malignancy, and the organ has become useless and deformed, to proceed at once to extirpate the eye, especially as the operation is not a formidable one.

Case.—Sarah Allen Willis, 16 years of age, daughter of one of the police, was placed under my care in the autumn of 1837. The globe of her right eye was much enlarged, and anteriorly converted into a fungous disease of a purple and in some parts, pale red colour, projecting irregularly from between the eyelids, which were red and swollen. The previous history of the case, as I learnt from the parents, was, that when about four years of age, she fell in a cornfield and received a severe injury of the eye, which had occasioned considerable inflammation. Medical treatment does not appear to have been then had recourse to, and disorganisation of the different parts of the eye, and the formation of the disease presenting the fungous appearance I have described, gradually followed. I gave a fair trial to mercurial and other remedial measures, but without the slightest efficacy; the disease at the same time making progress. Her general health was in some measure, although slightly, affected by the disease, and the catamenia had not appeared. I had not much expectation, from the commencement, of effecting benefit in this case, otherwise than by removal of the eye; and I felt no hesitation, (especially with the concurrence of Farnham Flower, Esq., a surgeon of high repute and experience, as well as others whom I met in consultation on the case,) after the unsuccessful result of the medical treatment, to recommend the operation. The recommendation was willingly acquiesced in on the part of my patient; and in December, 1838, I extirpated the eye in the manner recommended by Mr. Lawrence. The hæmorrhage was, without much difficulty, restrained by compresses, and the case proceeded in a most favourable manner, so that in a few days after the operation my patient was recovered so as to be able to take air and exercise.

Dissection of the Eye.—In examining after the operation, I find the space usually occupied by the humours filled, and nearly the whole of the eye converted into a fungous mass; the exception being at the posterior part, which with the optic nerve appeared sound. It varied in different parts as respects its consistency and colour.

Result of the Case.—A period of more than two years having elapsed, I can with confidence pronounce this to have been a successful case, and attended with the happiest consequences. A few months after the operation the catamenia appeared, she daily improved in health, the sight of the left eye has become much improved, and she is now in every respect healthy.

CÆSARIAN OPERATION.

PRESERVATION OF THE CHILD.

A strong, healthy woman, 35 years of age, experienced some rheumatic pains during her second labour. Soon afterwards, the power of walking became weakened, and gradually abolished. As the woman was again pregnant, she was examined by Dr. Hoëbeke, who found the pelvis so much contracted as to render delivery impossible; several other medical men were of the same opinion. Gestation proceeded without any accident, and labour commenced on the 13th of April, 1839. Dr. Hoëbeke now found that the tuberosities of the ischia were in contact with each other; he, therefore, decided at once on operating. At 11 o'clock, P.M., the linea alba was divided by a longitudinal incision, the uterus opened, and the placenta removed. The child presented its breech to the wound, and was extracted with some difficulty, for the head was already engaged in the inlet of the pelvis. The child, however, was brought into the world strong and healthy. The wound was now cleaned, and united by six points of suture; the whole operation lasted only one quarter of an hour, during which time the relator assures us that the patient did nothing but *laugh and joke*.

14. The patient had passed a good night, without any pain or febrile access; on the 16th, however, the face was red, the pulse quick, and she complained of pain in the region of the bladder, with some shooting pains in the abdomen. On the 17th the patient felt much better, and the lochia came away in abundance. On the 20th the wound was completely cicatrised, and the woman was allowed to take some food. On the 24th Dr. Hoëbeke, regarding the patient as convalescent, left her under the charge of another medical man, as he was obliged to leave town for a few days. On his return

the patient was dead, and he then learned that she had been quite well up to the morning of the day of her death, when some fever, with cough, supervened; the abdomen being tumid, but not painful. These symptoms were regarded as depending on bronchitis, yet the woman sunk very rapidly in the evening. On examination after death, extensive inflammation, with effusion of pus, was discovered in the abdomen. The incision in the uterus was widely patent, and presented the appearance of a large ulcer. This was the sixteenth operation which Dr. Hoebeke had performed, and he assures us, that in *eleven* of the sixteen he has been successful.—*Arch. of Belgic Med. and French Lancet*, No. 56, 1840.

CYSTICERCUS OF THE BRAIN.

M. Bouvier recently presented to the Royal Academy of Medicine an example of this entozoon, which he found in the brain of a woman, aged 83 years. She had been admitted into the hospital on the 30th Dec., 1839, presenting no other symptoms than slight feebleness of the intellectual faculties, with some loss of muscular power of the left leg. Eight days afterwards she was seized with pneumonia, and died without any other symptom of cerebral derangement. On examination, after death, a great number of cysticerci were found on the surface of the hemispheres, in the membranes, cortical substance, optic thalami, corpus callosum, and cerebellum. Each cysticercus was enclosed in a small cyst, slightly adherent to the surrounding parts. The volume of the animal did not exceed that of a large pea, and seemed to consist, in great part, of a transparent vesicle, containing a very minute oval body, which is the cysticercus itself, rolled up. In a few examples, a point, like the head of a pin, could be discovered at the extremity of the ovoid; this is the head of the worm, and, on drawing it gently out, the animal is unrolled, and presents the exact appearance of the figure depicted by Bresmer.—*Bul. de l'Acad.*, Feb. 29, 1840.

BILIARY CALCULI
VOIDED BY THE URETHRA.

Dr. Faber details the history of this very curious disease. The person affected was a female, and did not indicate the passage of gall-stones by the ordinary symptoms, nor was any disease of the liver suspected; she never had jaundice, but had suffered lately, for a considerable time, with pains and tenderness in the hypogastric region, and tenesmus of the bladder; her urine had become yellow, green, and brownish; more recently, she had observed several small calculi to escape from the urethral canal. Chemical analysis proved these calculi to contain the same constituents, as ordinary gall-stones. At length the pain in passing the urine became so great, that it was deemed necessary to cut into the bladder to extract a large calculus. The woman eventually recovered.

Of the numerous cases of biliary calculi referred to by Dr. Faber, one only, recorded by M. Barraud, presented any similarity to the foregoing. As for the explanation of this singular fact, there are but two ways of accounting for it, either by supposing that the calculi were formed in the hepatic ducts, and thence passed into the bladder through a fistulous communication, or that the principles of the bile were deposited in the pelvis of the kidney, and formed the calculi in that organ. Dr. Faber inclines to the latter opinion.—*Gazette Médicale.*

CROUP—TRACHEOTOMY—CURE.

The propriety of opening the trachea in certain cases of croup has been questioned by some of the best authorities in this country. Indeed, tracheotomy in croup and the Cæsarean operation seem to stand exactly in the same position. English practitioners shrink from the responsibility of performing them, more from a fear of consequences to themselves than from a just estimation of the value of those operations. The following case, however, amongst many others which we might cite, proves that a child may be rescued from instant death by a timely performance of tracheotomy for croup, even under very unfavourable circumstances.

A child, 7 years of age, who had just recovered from typhus fever, presented a few symptoms of bronchitis on the 20th February, 1840. On the 22nd, the symptoms assumed a more threatening character; there was considerable fever, with dyspnœa and prostration. Six leeches were applied to the neck, sinapisms placed on the legs, and three grains of tartar emetic were administered. The emetic did not operate; the leech-bites furnished but little blood; and the sinapisms, which the attendants had forgotten to remove for several hours, gave rise to considerable inflammation, terminating in ulceration. At five o'clock, P.M., the state of the little patient was extremely alarming: the voice was extinct, the pupils dilated, skin cold, pulse very feeble; in a word, asphyxia seemed to be imminent. Attacks of suffocation were produced by every attempt to examine the condition of the fauces; but false membranes were discovered on the back of the pharynx, and the medical attendant now learned, for the first

time, that the child had laboured under symptoms of croup for the last few days. A consultation was held, and it was determined that tracheotomy alone afforded any chance of saving the child's life; it was at once performed on the bed where he lay, by the light of a bad candle, for the boy was in such a state as to render dangerous the removal to a more favourable place. The patient exhibited scarcely any signs of sensibility during the operation. As soon as the trachea was opened, the air rushed in with some force, and produced violent cough; a piece of false membrane was immediately expelled through the lips of the wound, and several other fragments were extracted from the trachea, by means of a sponge mounted on a bit of whalebone. During the days which followed the operation, a warm infusion of mallows was frequently dropped through the canula; this excited coughing, and, up to the eleventh day, cylindrical portions of false membrane, evidently produced in the bronchi, were expelled. The effects of the operation were almost instantaneous. The child, who was in a dying state, seemed to have been restored to life the moment the trachea was opened. On the third day the patient was seized with violent fever, dyspnœa, and prostration; pneumonia had set in; a quantity of red viscid mucus, mixed with *debris* of false membrane, was discharged through the wound; a blister was now applied to the chest, but produced no benefit; on the contrary, it gave rise to pseudo-membranous inflammation, followed by an ulcer, which did not heal for fifty days. The boy's life was now again despaired of by his medical attendants. Recourse was had to the tartar emetic. On the fifth day after the operation, six grains were administered in four ounces of water; the patient bore the medicine perfectly well, and it was continued with great benefit for two days; but on the third, by some mistake, eight grains were given at once. This produced frequent vomiting, purging, and a discharge of bloody mucus. However, the symptoms of pneumonia gradually disappeared; the character of the sputa became improved, the wound healed, and the child was perfectly well on the 44th day.—*Bul. de l'Acad.*, May 15, 1840.

OPERATIONS FOR THE CURE OF DEFORMITIES.

In a late Number of the French "Medical Gazette," M. Guerin gives the following list of parts which he has divided by the method of sub-cutaneous incisions:—

1. *Neck.*—Sterno-cleido-mastoid; trapezius; levator anguliscapulæ; splenius; complexus; cervicalis ascendens. 2. *Back.*—Trapezius, from its insertion along the scapula; rhomboideus; latissimus dorsi; sacro-lumbalis; longissimus dorsi; intertransverse fasciculi of the spine. 3. *Upper Extremity.*—Deltoid; biceps; long supinator; flexor carpi radialis; flexor carpi ulnaris; superficial flexor and common extensor of the fingers. 4. *Lower Extremity.*—Psoas and iliacus; long adductor; sartorius; rectus femoris; tensor vaginæ femoris; glutæi; biceps; semi-tendinosus; semi-membranosus; tendo Achillis; tibialis anticus and posticus; long and short flexors; the extensor, abductor, and adductor muscles; the peronei. 5. *Fasciæ and Ligaments.*—Fascia lata and plantar fascia; sterno-clavicular ligament; scapulo-humeral; coxo-femoral; lateral of knee-joint; lateral and posterior of ankle-joint; astragalo-scaphoid capsule; scaphoido-cuneiform.—*Gaz. Med.*, No. 22, 1840.

LIGATURE OF THE COMMON ILIAC ARTERY FOR ANEURISM.

M. Deguise, a French surgeon, has recently performed this operation with success. During the operation, the aneurismal sac, which occupied the external iliac artery, was accidentally opened, and gave rise to copious hæmorrhage; but this was readily arrested by compressing the aorta. Fearing that bleeding might occur from the inferior orifice of the iliac, or from the sac, the surgeon tied the femoral artery just below Poupart's ligament, but here again an accident occurred. The femoral vein was divided by the bistoury, and tied. Notwithstanding these untoward circumstances, the patient recovered in a couple of months.—*Gaz. Med.*, No. 22, 1840.

LUXATION

OF THE SECOND CERVICAL VERTEBRA OF SEVEN MONTHS' STANDING—REDUCTION—CURE.

M. Jules Guerin has succeeded in effecting the reduction of a dislocation of the axis, which had been produced seven months before, by a fall on the chin. M. Guerin was fortunate enough, after repeated trials, to bring the displaced vertebra gradually to its right position. All the external signs of the dislocation soon disappeared, and in three months the patient was able to execute perfectly all kinds of motion of the head and neck. We shall communicate to our readers this interesting case as soon as M. Guerin has published it in detail.

Revaccination.—In consequence of the prevalence of small-pox in Belgium, the Minister of War has ordered that the whole of the Belgian army should be revaccinated.

On Diseases of the Bladder and Prostate Gland. With Plates. By WILLIAM COULSON. Second edition, greatly enlarged. London: Longman and Co., 1840, pp. 258.

THE value of a book is not always manifested by the announcement of a "*second* edition;" for, sometimes, at least half of the first "edition" has been given "free gratis" to patients, friends, and editors, books themselves being often only advertisements of something else, intended, perhaps, to call attention to talent and capabilities which would otherwise lie unknown and serviceless to the public. At other times, the only part of the book which can be called "new," is the title-page, which, on the *re-issue* of another hundred copies, is *re-set*, with a new line "second edition." This latter is, clearly enough, not a manœuvre of the publisher on the present occasion.

"Since the publication of my former edition," says the author, "I have availed myself of the increased opportunities which have occurred to me, to follow up my investigations of the subject. I have endeavoured to render my present edition a more complete work as to the diseases of the bladder; and I have added three chapters on the affections of the prostate gland, which are so closely connected, and so often confounded with, those of the bladder."

Nothing can be more advantageous to the members of a busy profession, than the devotion of the attention of individuals amongst them to particular diseases, and the communication from time to time of the results of their investigations. It is true that multiplied observations, made by excellent observers, are to be found scattered through the volumes of our predecessors; but energetic minds prefer to search for new facts and new truths, rather than retrograde and reflect upon the old. Such is the impulse of active mental powers, and we must admire this natural and valuable disposition; but the quality is not frequent.

The treatise before us will save the surgeon, who demands a work on this subject, some trouble; it contains many interesting and important facts and observations ready prepared for his examination. The first chapter is occupied with a consideration of the nature, the composition, and the changes of the urine in health and disease. With reference to this secretion the author observes,

"Of the excretory organs none are more important than the kidneys; none, having their functions diminished, depraved, or suspended, give rise to more alarming symptoms; none having their structure disorganised are attended by greater pain, or have that event followed by greater danger. In diseases of the bladder and prostate gland, the secretion of urine is often so much deranged, as to render a knowledge of the changes which it undergoes indispensable to the successful management of these affections."

The truth of the following observation is impressive:—

"A knowledge of the urine in health, and of the variations to which it is subject in disease, is one of the bases upon which we may safely rely for much valuable information. In fact, the different appearances of this fluid may be considered as indicating, not merely different modifications of the action of the organs separating it, but also as affording correct information of changes that have taken place in other parts of the organic system."

The second chapter is devoted to that very painful and distressing affection, irritability of the bladder, its symptoms, diagnosis, causes and mode of treatment. The author particularly recommends the diosma crenata, a species of buchu, which, in his experience, has been more frequently successful than any other medicine in this disease. Paralysis of the bladder, a condition the very opposite of irritability, and acute inflammation of the mucous membrane, occupy the two next chapters. In discussing the progress of the latter disease, the author observes:—

"If the disease be not arrested in the early stage, ulceration of the mucous membrane occurs. Ulceration may extend so deeply into the substance of the bladder as to cause perforation of its parietes; and cases are recorded of extravasation of urine thence taking place into the abdomen. In these cases life is soon destroyed by the extension of peritoneal and cellular inflammation. But, when the ulcerative process extends to the other tunics of the bladder, it usually happens that it is accompanied by effusion of lymph exterior to the ulcer, which thus unites the neighbouring parts, and prevents the escape of urine; and in this manner a communication is sometimes formed between the fundus of the bladder and the ileum, or the sigmoid flexure of the colon, or between the under surface of the bladder and the rectum: in the former of which cases the fæces pass into the bladder and through the urethra; while in the latter, the urine passes into the rectum and is voided with the fæces."

The subject of chronic inflammation of the mucous membrane deserves all the attention of young surgeons. Medical science is almost daily making rapid strides in the pathology and treatment of those mucous membranes which can be observed by the eye. The most effective therapeutic agents have been pointed out by the skilful practitioner, while the microscope and careful investigation have explained the rationale of their action. In the inflamed conjunctiva we may trace large and dilated vessels, almost bursting under their tardy burden, relieving themselves by pouring through their coats the more fluid and soluble portions of their contents, in the form of a morbid secretion. These same vessels, under the influence of a moderate stimulant, may be almost seen to contract their diameters—to urge on more rapidly their vital stream—to regain their normal bulk and healthful function. The bladder, deeply as it is placed within its bony cavity, approachable only through a long and narrow canal, is not the less within reach of similar applications. Sir Benjamin Brodie injected the bladder, in this disease, with a very weak solution of nitric acid. Mr. Coulson states that he has repeated this process with great success, and illustrates its use by a case. Lallemand went so far as to apply the nitrate of silver, in its solid form, to the surface of the mucous membrane; and Devergie has recorded instances of cure from the injection of balsam of copaiba. In the employment of these and similar remedies the counsel of Sir B. Brodie is to be carefully borne in mind:—"In aggravated cases of disease, when the symptoms are at their greatest height, the mildest injections, even those of tepid water, will do harm rather than good. When, however, the symptoms have in some degree abated, the injection of tepid water, or decoction of poppies, is, in many instances, productive of excellent effects."

"Acute inflammation of the muscular structure of the bladder" is a disease of hypothesis; the existence of such a title is, undoubtedly, a fair challenge to inquiry; but the author unquestionably advances too much when he expresses himself of opinion, "that it is seldom exclusively the seat of inflammation, unless it be at its very commencement." The cases cited under the above designation must be considered as instances of a severe form of acute inflammation of the mucous membrane. "Chronic inflammation of the muscular coat," presents a still farther trespass on the courtesy of the reader; and in perusing the passages thereto relating, we conclude, that in following out an attempt to "establish clearly the distinction between the inflammatory diseases which attack the several coats of the bladder," the author has adopted some superfluous subdivisions—some distinctions without differences. His appeal to the anatomy and physiology of the muscular structure of the bladder and urethra, at p. 137, is at variance with the present state of our knowledge, and is open to the severest reproofs of criticism.

We pass over the three following chapters, on "Inflammation of the Peritoneal Coat of the Bladder, and of the subjacent Cellular Tissue;" "Spasm of the Bladder;" and "Fungus Hæmatodes and Cancer of the Bladder." One of greater interest is, that of "Calculi and other Foreign Bodies in the Bladder—Operation for Stone—Lithotomy and Lithotripsy;" in which are detailed, the characters of the various calculi, their origin and causes, and the symptoms which they induce; together with the various operations that are applicable for their relief.

The next chapter relates to Wounds and Injuries of the Bladder, and the three remaining to Inflammation of the Prostate Gland and Prostatic Calculi, in which the common principles of treatment are detailed. The latter portion of the work is very deficient in that which constitutes the essential value of monograph treatises, viz., the evidences of personal experience, and illustrative cases.

WORKS OF JÖRG AND RICORD.

To the Editor of THE LANCET.

SIR:—If you would kindly convey the hint, that the writings of the very justly-esteemed Jörg are sealed to most of the profession in this country, as well as those of M. Ricord, especially his last work on Syphilis, which is, and will be, a standard work; perhaps some one of the many French and German translators of the present day would supply the deficiency. Your obedient servant,

ALPHA.

UNIVERSITY COLLEGE HOSPITAL.

INJURY OF THE OLECRANON PROCESS—ERYSIPELAS—SLOUGHING—AMPUTATION.

J. B., aged 59, was admitted Nov. 27, 1839, under the care of Mr. Liston. A week ago he was pulling a chisel out of a wall and struck his elbow. He is a carpenter; of sanguineous temperament and full plethoric habit; and subject to erysipelas, of which he has had four attacks of the idiopathic kind, affecting the head and neck. Shortly after the receipt of the injury the elbow began to swell, and was red and painful. He had, on the present occasion, been twice leeched, and used a cold lotion twice a-day. On his admission there was an abscess on the elbow, with a good deal of inflammation around it. His tongue was white and coated, and he complained of thirst. He was ordered house medicine; the abscess was freely opened; water-dressing and fomentations were applied to it, and the limb was placed in an elevated position.

30. The inflammation about the abscess is very much reduced. The integuments in the neighbourhood, however, are much thickened. This case illustrates the serious effects that a slight injury over the olecranon may cause.

Dec. 3. The abscess does not seem inclined to heal. The water-dressing is continued. His bowels are kept well open.

6. A splint was applied on the fore-part of the arm, in order to keep it constantly straight, and favour the healing of the abscess.

8. The abscess is in much the same state.

14. There has been a good deal of uneasiness and inflammation in the arm and around the abscess. He was ordered to keep his bed, to leave off the splint, to take immediately eight grains of the hydrargyrum cum cretâ, and to foment and elevate the limb.

15. There is a good deal of erysipelas about the wound, which appears disposed to slough. (A patient in this ward has had phagedenic ulceration of the thigh.) His tongue is coated, pulse full, skin hot, with thirst; has no pain in the head, chest, or abdomen. A poultice was ordered to be applied to the affected part, and the skin around the wound was freely punctured. Fomentations to be used three times a-day. Pain burning and tingling. To have a dose of saline aperient medicine, with antimony, every four hours, and the hydrargyrum cum cretâ at night.

16. He is much the same, but there is not quite so much swelling and inflammation in the upper part of the arm; there is also less redness. The wound still continues to look sloughy. His bowels are open.

17. He has passed a restless night, and feels weak. Pulse soft; perspires much; pain in the arm diminished; tongue coated, but moist; countenance anxious. To have eight grains of the hydrargyrum cum cretâ, with twelve grains of Dover's powder, at bed-time.

18. He feels very weak, and perspires very much. His tongue is dry. He sleeps tolerably well at night. The pain in the arm is considerable; but the redness in the upper part of the limb less. His bowels are open; pulse full, but soft, 90. To have full diet, with four ounces of wine daily.

20. His arm is still very painful. Mr. Ancram divided the skin freely, and a quantity of sloughing cellular tissue was apparent. On opening the skin the knife grated on the bone as though it were bare. Quinine, with dilute sulphuric acid and infusion of bark, were prescribed. Full diet; eight ounces of wine; and beef-tea daily. Poultice continued.

22. He has experienced great relief from the incision, the upper part of the arm is not at all painful or red; he is still very weak. The original wound in the elbow has less of the sloughing appearance. Two small abscesses have formed lower down, for which a counter opening was made. Tongue moist, not brown; pulse 75, compressible; feels somewhat stronger. He perspires a good deal at night; has thirst. Fifteen minims of tincture of opium to be added to each dose of the mixture.

25. Very much improved; the wounds are beginning to granulate freely. There is very little inflammation or pain in the arm. His tongue is somewhat drier, probably from the opium; he feels, however, much more comfortable; is cooler, does not perspire so much, and his appetite is improved. There are yet several sloughs to separate.

29. His general health continues to improve; the opium has been omitted from his mixture. He sleeps well, and does not perspire much. There are large sloughs, particularly at the lower opening, and they appear to consist for the greater part of the fascia of the posterior part of the arm.

31. Much the same. The wounds have been somewhat enlarged to give free exit to the sloughs; his health is good, but he is very weak.

Jan. 2. Going on well; the wounds are becoming free from sloughs, and the joint appears uninjured; a piece of the extremity of the olecranon is exposed. General health much improved.

11. Two of the wounds on the posterior part of the arm were connected by an incision. He is going on well; the discharge is not quite so profuse. A piece of dead bone is felt at the bottom of several of the wounds. General health still improving.

15. He has no power over the forearm; the joint appears a little weakened, and its

lateral motion is much too great. There is considerable discharge from the wounds, and sinuses extend down towards the forearm. He dislikes to sit up long, from feeling considerable pain in the forearm; his strength does not improve much.

18. The joint communicates a grating sensation, which shows that considerable ulceration has taken place in it. The discharge is very profuse; his pulse is quick; he sleeps badly at night; perspires greatly; and is very weak. He has no diarrhœa; the pulse is quick, but compressible. Mr. Liston determined to amputate the arm, the surrounding parts being so much undermined that he considered this would be a safer operation than excising the joint.

20. The arm was removed to-day by an outer and inner flap; seven vessels were tied. The wound continued to ooze blood until nine o'clock, P. M. (seven hours after the operation) when it was united by three sutures and strips of adhesive plaster.

On examining the articulations, after it had been injected with size and vermilion, there was found to be extensive ulceration of all the cartilages from their free surfaces, and vessels could be distinctly seen, under the microscope, piercing the cartilage, and forming communications with the synovial membrane.

The progress of the case after the operation was tedious, and he suffered much from debility, which was combatted by the use of good diet and wine. There was sloughing of the wound, and still some erythema at the date of his discharge on the 1st of March, but it was thought that his health would be more rapidly re-established at home.

EXOSTOSIS OF THE FEMUR—OPERATION.

J. S., aged 9, was admitted February 22, 1840. Six months ago he perceived a small swelling on the inside of the lower part of the left thigh; this gradually increased until his admission; he had never suffered any pain or inconvenience from it. There is a swelling of about the size of a walnut, a little above the condyle, and apparently connected to the femur. Mr. Liston determined on removing it, and having made an incision in the direction of the fibres of the vastus internus muscle, a small cartilaginous exostosis was exposed, having a narrow neck, and connected near to the condyle. With the cross-cutting pliers and the straight bone forceps, the diseased growth was quickly removed. A small artery, which bled, was tied, and the ligatures were cut off close to the knot. In the evening the wound was brought together with some strips of isinglass plaster.

March 15. The wound is nearly well. Some little erythema occurred a few days after the operation, and the wound would not unite by the first intention. The strips of plaster were soon removed, and the wound granulated and healed by that process.

SPHACELUS OF THE FEET FROM COLD.

C. H., aged 15, was admitted February 1, 1840, under the care of Mr. Liston. She is a native of Africa, and came to England six months ago. She was left in a lodging-house by the lady who brought her over; was supplied with plenty of food, but was not clothed sufficiently. During the cold weather, ten days ago, her feet began to be painful, the pain being of a pricking, stinging character; "pimples" began to appear over her feet, and she was sent to the workhouse. She was there attended by the surgeon, but getting worse, was sent to the hospital. On admission, both feet were in a state of sphacelus, as far as the proximal extremity of the metatarsal bones. There is still some stinging pain. Her general health is pretty good, but she feels very cold. Her bowels are not open; tongue clean; pulse weak, 80; the legs do not appear inflamed. She was ordered full diet. A poultice, made with chloride of lime solution, was applied to the feet, and she took quinine three times a day.

Feb. 3. Mr. Liston ordered the line of demarcation to be dressed with wetted lint, and the mortified part of the foot to be exposed to the air and allowed to dry.

5. The line of demarcation being clearly formed, Mr. Liston removed the toes, with the metatarsal bones, at their articulation, with the cuneiform and cuboid; water dressing was applied.

6. She has vomited during the night, and to-day her pulse is very quick, but extremely weak; the surface is cold, and she feels very faint; bowels confined. To have three minims of hydrocyanic acid, with five grains of sesqui-carbonate of ammonia, every three hours, and four ounces of brandy during the day.

7. In much the same state; still very faint; surface and extremities cold. To have her brandy increased to eight ounces. She continues to vomit. To have enemata of beef-tea.

8. Vomiting ceased; her appetite is returning. The stumps are beginning to discharge healthy pus, and to granulate freely. Pulse much fuller; surface warm; she is altogether much better. She took an aperient mixture, which acted well. To have her usual diet, and let the stimulants be omitted.

17. The stumps are suppurating freely, and beginning to cicatrise. She has some fever to-day. Ordered to take some castor oil. Pulse full and quick; thirst.

22. She is going on well, and the stumps granulating freely. Health and appetite good.

March 1. Her general health is quite good; the wounds are clear and cicatrising very healthily.

15. Health still continues good; wounds cicatrising and contracting.

April 15. The wounds are fast healing; health quite good.

May 6. The ulcer is nearly healed; a small piece of bone still remains to come away from the right foot.

MELANOTIC TUMOUR OF THE MIDDLE FINGER.

A. B., aged 18, was admitted January 30. She has had a swelling on the palmar surface of the middle finger of the left hand, ever since her birth. It caused her no inconvenience until about three years ago, when it began to be very painful, and prevented the free use of her finger. The swelling was opened, and a small black substance removed. When Mr. Liston saw her, she had a small swelling on the palmar surface of the little finger, about the size of half a hazel nut. There was a cicatrix where the tumour had been cut into. The tumour was very painful, particularly when she attempted to bend her finger, which she did with great difficulty. Mr. Liston made an incision on each side the scar, and a transverse cut at each extremity of the first incision. He dissected back the flaps, and exposed a small quantity of melanotic matter, deposited in two or three small masses in the cellular tissue; these were removed, together with the cellular tissue and fat in the neighbourhood. Cold water dressing was applied, and the flaps brought together by two points of suture, with strips of isinglass plaster.

Jan. 31. Some erythema about the hand. Fomentation was applied to the affected part; she took purgatives of colocynth and calomel at night, with salines in the morning, and on the 14th of February was discharged cured.

ULCERATION OF THE TONGUE.

J. H., aged 49, was admitted March 27, under the care of Mr. Liston. He is a gardener, and has enjoyed good health up to the commencement of the present attack. He has long suffered from caries of the two last molar teeth of the left side of the lower jaw. One of the teeth was sharp, and about three months ago irritated the tongue so much as to have occasioned, at the expiration of eight weeks, a considerable-sized ulcer. The tooth was extracted almost immediately that it gave rise to inconvenience; but the ulceration, nevertheless, continued, and has been getting worse up to the present time. On admission, the stump of the last molar of the lower jaw (which appeared somewhat swelled) was found remaining. He has a large ulcer on the right side of the tongue, about the size of half-a-crown, very hard, and the base apparently raised from the parts around; his general health is good, and his appetite unaffected. He has had numerous applications made to the disease, but without diminishing the ulceration. As the hardness seemed tolerably circumscribed, Mr. Liston determined to extirpate, by ligature, in the following manner:—A needle, armed with a double thread of strong whip-cord, was passed below the ulcer, a little way from its anterior margin; one ligature was then tied in front of the disease, the second ligature was again passed near the posterior part of the ulcer, and being tied, the intervening part was strangulated. Before withdrawing the needle, another ligature was passed through the eye, and withdrawn with it, and this was tied beyond the posterior part of the disease. Thus, by the three ligatures introduced at two different places, the whole of the disease was completely strangulated.

March 31. Tongue not much swollen, but there is profuse salivation. He does not suffer much pain, and feels comfortable.

April 2. Suffers less pain; the tongue is swollen, and the salivation continues profuse. He has no sympathetic or irritative fever, and his general health remains unaffected.

4. There is less salivation; the tongue is somewhat less swollen, and the strangulated portion appears to be about to separate.

5. The ulcer of the tongue appears not quite strangulated. Mr. Liston desired that a ligature might be placed round the diseased mass and tied tightly.

9. The whole of the ulcer has come away, and has left a clean sore, which is healing fast. The salivation has ceased, and the man expresses himself extremely comfortable.

14. The tongue is almost completely healed; there is no hardness left, and no pain; the part which was removed has left a cavity which is fast filling up. Discharged cured.

CHARING-CROSS HOSPITAL.

SOFTENING OF THE BRAIN WITHOUT INDICATIVE SYMPTOMS.

Elizabeth Lane, aged about 20, of florid complexion, was admitted in the beginning of May, under the care of Dr. Chowne. She had, during various periods, been attended as an out-patient for habitual dyspnœa, accompanied with symptoms of bronchial irritation and increased secretion. In almost every part of the chest there was found mucous râle. Beneath the clavicles there were no other abnormal sounds; there was expectoration of a considerable quantity of mucous and muco-purulent secretion. The catamenia were not irregular. The dyspnœa was so severe as to occasion a livid colour of the lips, and pallor, with anxious expression of the face. These were accompanied

with great languor, a feeble, quick pulse, and the general appearance of sinking. There was pain in the head at different parts, at different times, but no other head symptoms, no delirium, or even temporary wandering; no intolerance of light or of noise, nor disturbance of vision; the expression of the eyes was natural; the tongue had a strong, white coat, which led to the inference that other mischief besides that in the lungs was in progress, although there was no sufficient indication to determine in what part. She was in this state when admitted into the hospital, with the addition of a troublesome diarrhœa, and was eight days under treatment. On the first day she had cretaceous mixture, with laudanum, for the diarrhœa, and an anodyne at night to procure rest. On the second, a repetition of the chalk mixture, a blister on the chest, and an expectorant and diaphoretic mixture. On the third, fourth, fifth, and sixth days the diarrhœa was restrained, but there was no other change in the general symptoms, except that the respiration became more embarrassed, and the patient appeared from day to day to be evidently sinking. The head did not appear to be more affected than on the first day of her admission. Upon visiting her on the morning of the seventh day, she was found to be in a state of coma, with the extremities of the right side paralysed. The head was shaved, and a blister applied. She could take no nourishment, and medicine could not be swallowed. On the following day she died.

After-death Appearances.—On the upper and outer part of the middle lobe of the left hemisphere of the brain, between the arachnoid and the pia mater, there was a deposit of pus extending over a surface about equal in size to half-a-crown. The pus was so well formed as to leave no doubt of its real character. In the left ventricle of the brain there was a firm coagulum of blood, about the size of a pullet's egg; the substance of the brain in the neighbourhood of the clot was somewhat softened. On the under surface of the anterior lobe of the same (the left) side, there was also softening and some pus; the odour of this softened portion of the brain was very offensive. The heart and pericardium were healthy. The right lung was distended with more than the usual quantity of air; the left lung was smaller than usual. It was bound down firmly to the pleura covering the ribs and diaphragm by strong adhesions, and much collapsed; the inferior lobe, especially, was congested with blood; some parts were hepatised. The bronchial tubes contained mucus and pus. The liver and other viscera were healthy.

Dr. Crowne remarked of this case, that the *immediate* cause of death was, no doubt, the effusion of blood into the ventricle by this accident the event was hastened by two or three days; but, prior to its occurrence, the vital powers were obviously sinking, for which the difficulty of breathing and general condition of the respiratory organs appeared fully to account. So evidently was the case tending to a fatal issue, that, when the coma and paralysis occurred, they appeared to be the result of effusion, consequent upon the fatal progress of the disease within the chest, under which she had so long been labouring, and the true character of the coma was masked by the presence of a state which led to the full expectation that effusion and death would take place. The formation of pus, however, and the softening of the brain, must have been the work of, at least, some days, and presented an example of those embarrassing cases in which serious disease makes its attack, and pursues its course, without announcing itself by the usual symptoms.

HOSPITAL OF LA PITIÉ.

ON THE PLAGUE OF EGYPT, BY M. CLOT-BEY.*

When I left France for Egypt in the year 1825, my ideas on the nature of the plague were entirely derived from writers on that disease. Like them I, also, was a contagionist; and my opinion was still further confirmed by a perusal of the works of the medical officers attached to the expedition into Egypt. I even went so far as to provide myself with a long stethoscope, for the purpose of examining the pulse of persons labouring under the plague.

On the day after my arrival (Feb. 11, 1825), a ship-captain requested me to visit a patient whom he supposed to be attacked by some malignant fever. I found the man in a state resembling that produced by a drunken debauch; his countenance was sunken, the eyes injected, and the gait unsteady. He complained of pain in the shoulder, where there was an enormous slough, and the axillary glands were enlarged. The analogy between these symptoms and those of the plague struck me; but the vessel came from Cyprus, where no case of plague existed at the period of its departure. The French consul-general laughed at my suspicion; but on the patient being examined by some Egyptian physicians, it was discovered that he really laboured under the plague.

This case made a deep impression on my mind. Myself, the captain, and several other persons, had touched the sick man, and afterwards held free communication

* The substance of a lecture, delivered by M. Clot-Bey, to a numerous assemblage of medical men, on the 26th of April last, in the lecture-room of La Pitié.

with the people on shore; yet, although the patient died of the disease, not a single individual caught it from him. I soon took my departure for Cairo, and there observed two cases of plague during the year 1825. I instituted the most careful inquiries, but could not discover anything calculated to confirm my preconceived ideas respecting the contagious nature of the plague. In the year 1832, I returned to France. Dupuytren required of me some information, and requested to know my opinion on the contagious or non-contagious nature of the disease. I was unable to give a satisfactory answer, because the facts which I had observed were too few in number to justify my drawing any decided conclusion from them. These few remarks show that my mind was completely free from prejudice at the period when the dreadful epidemic of 1835 set in. As chief of the medical staff, it became my duty to advise the government, and ordain all the necessary measures during the prevalence of the epidemic, which lasted five months. The result of the experience then obtained I shall now communicate, and in particular direct your attention to some points connected with the origin, etiology, treatment, and contagious or non-contagious nature of the plague.

Origin of the Plague.—The majority of writers assert, that the plague has existed in Egypt from time immemorial; but recently, a few medical men have put forth a contrary opinion. A commission of French physicians was sent into Egypt to decide the question, and came to the conclusion, that the plague was a disease of recent origin. Yet this opinion admits of reasonable doubt. We may even hesitate to admit that any epidemic disease is of recent origin. The cholera has always existed in India; and measles, small-pox, scarlatina, &c., have certainly prevailed from time immemorial. But what reason have we for supposing the development of a new epidemic? Has the climate changed? Has the nature of the soil undergone any change sufficient to explain the nature of a new disease? The advocates of contagion are accustomed to bring forward the fact of embalming as a proof that the Egyptians were, in former times, aware of the possibility of plague being communicated by exhalations from the body. But were this the case, why did they neglect to embalm their slave population? All the circumstances which attended embalming prove that it was a religious ceremony, and not a measure connected with public health. Hence, I conclude, that plague has existed in Egypt from time immemorial.

Etiology of the Plague.—The immediate cause of plague is as little known to us, as is that of cholera, yellow-fever, scarlatina, or the influenza, &c. We merely perceive some connection between its spread and the medical constitution of certain periods of time. Writers, however, persist in attributing the disease to particular causes. Thus, some will attribute it to the overflow of the Nile; but they are evidently ignorant of the nature of this overflow. The residue which is left by the Nile is nothing but pure earthy soil, without any mixture of vegetable or animal matter; the layer deposited is not much thicker than a sheet of paper, and it is even doubtful whether the irrigation be favourable to vegetation, so small is the quantity of alluvial matter deposited by the waters. Other writers speak of evaporation or exhalations from the Nile, which brings with it decayed vegetable matter from the marshes traversed during its course. Were this the case, plague should be most prevalent in Upper Egypt, where such marshes exist, and in Nubia; but it is almost unknown in those countries. The truth is, that very false ideas prevail concerning the overflow of the Nile. The inundation of Egypt is completely artificial, and takes place only when it is thought advisable to effect it by opening the dykes. Upper Egypt is first irrigated; then Nubia; then Lower Egypt. Any extensive inundation is the result of accident; but even then it has not been observed that plague prevails more extensively, or with greater intensity, than at other times. Various other causes have been assigned, such as poverty, filthiness of the inhabitants, &c. To these a simple answer suffices: they exist in much greater force in Upper Egypt, where, as I have remarked, plague is unknown. Hence, I conclude, that local causes have no influence in the production of plague.

Symptoms.—The want of time does not permit me to enter upon this point. You will find the symptoms of plague perfectly described in books.

Treatment.—The remark which every scientific physician has applied to cholera is equally applicable to plague. The whole range of the materia medica, every known therapeutic agent, has been tried over and over again, without success. When any morbific agent attacks the system with such violence, as, within the space of three days, to quadruple the size of the spleen, to render the mesenteric glands as large as oranges, while at the same time it reduces them to a mere jelly, to force the blood from its vessels, &c., what hope can we place in medicine? How difficult must it be to arrest such fearful destruction?

Morbid Anatomy of the Plague.—On this I should wish to dwell at some length, but time does not permit me to do so. I shall merely observe, that a few bodies were examined by the French commission; but the

abdominal cavity alone was examined, and that in a superficial manner; hence the morbid anatomy of plague was imperfectly understood until the last few years. It would detain me too long to place before you a faithful detail of the pathological appearances; I shall, therefore, defer the consideration of this point to some future opportunity, and pass to an examination

Of the Contagious or Non-contagious Nature of the Plague.

This, perhaps, is the most interesting point in the history of the plague: it was never examined by the ancients. The moderns admit two forms of contagion: one by miasma; the other, by inoculation. Let us see whether the plague belongs to either of these two forms. We cannot establish the existence of a virus capable of being propagated by inoculation. Where are the external characters which constantly exist in all diseases depending on a virus? Not the malignant pustule, which exists only in one-third of the cases. Not the bubo, which is far from being a constant symptom. Finally, the matter of plague bubo, and of the malignant pustule, does not produce plague, when introduced into the system by inoculation. Hence, we reject the idea of contagion by virus.

Contagion by Miasma.—This has given rise to the theory of infection. The advocates of this theory say, that the first person who was attacked by plague, must necessarily have acquired the disease under the influence of general causes, as he could not have caught it from any other individual. These general causes are the decomposition of animal and vegetable matter. Let us admit this theory for an instant: the vehicle of the miasma must be the atmosphere; hence, any attempt to avoid the exciting cause, or miasma, must be vain, and the sanatory measures now adopted useless. But we have other objections of a more serious nature. No one knows how the epidemic commences; here the contagionists are sorely embarrassed; the disease passes through its different phases and disappears. The dead bodies of its victims remain, their clothes are worn by the survivors, but no fresh case appears after the months of May and June. During the epidemic at Alexandria, from five to six hundred houses, in the quarter where plague broke out, where shut up by order of the government; the doors and windows were built up, and the keys deposited in the hands of the authorities. On the cessation of the epidemic, these houses were thrown open; yet, although the air had remained unchanged, and consequently charged with miasmatic poison (had any such existed), the persons who occupied the houses were not attacked by plague; the furniture, clothes, &c., contained in the condemned houses were sold by public auction, yet not a single individual amongst buyers or sellers was affected by the supposed contagion.

Here is another of a similar nature:—In the hospitals the same clothing was distributed, during the epidemic, to various classes of patients; and, after its cessation, the pestiferous garments, impregnated with the matter of buboes, pustules, &c., was given to the ordinary patients, yet not one case of plague was occasioned by this practice. From the above considerations, I conclude that plague is an epidemic disease analogous to cholera, yellow-fever, &c., and dependent on some cause which is different from contagion. It is unnecessary, then, to say, that I regard quarantine as being altogether useless. Besides, it is a measure completely delusive, being violated in every possible kind of way. I have seen occurrences take place at Marseilles of the most extraordinary kind, when we consider that the lazaretto is directed by the most strenuous advocates of contagion. While I was detained there myself, in quarantine, I passed a carpet and a Cachmire shawl; and similar infractions are daily committed in every quarantine station throughout Europe. History, also, shows how ill-founded are the fears which prevail concerning the propagation of plague by contagion. The Crusades never occasioned any extension of the disease from east to west; and the actual deaths produced by plague were less before the institution of lazarettoes than they have been since. It is said that Europeans escape the plague, in consequence of the precautions which they take to avoid contagion. I can assure you that this is false. The most perfect seclusion is no guarantee. As a proof of this, I shall relate to you the most striking fact with which I am acquainted. On the outbreak of the epidemic, the Pacha retired to a garden, at some distance from Alexandria, situate in a most delightful and healthy locality; the garden was surrounded by a wooden palisade, and outside this was drawn a military cordon, the sentinels being placed at distances of fifty paces from each other; yet a negro servant was suddenly attacked by plague, and the disease extended to seven other persons. Four of the military were attacked at a subsequent period.—*French Lancet*, April 28, 1840.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, June 9, 1840.

Dr. MERRIMAN in the Chair.

Observations on the Mode of Union of Fractured Bones. By R. H. MEADE, *Esq., Lecturer at the Middlesex Hospital.*

THIS paper, which is one of a series upon the subject, intended by the author to be brought before the Society, contains the details of several experiments performed on rabbits and guinea-pigs, with the view of determining the precise mode of union in fractures of the flat bones, the scapula being here selected for the purpose, as the most easily fractured. The animals chosen were of different ages, that it might be ascertained whether age exerted any material influence on the reparative process, and care was taken to inflict as little injury as possible on the soft parts. Preparations and drawings of the parts were exhibited in illustration of the narrative. From these experiments, nine in number, and many others of a similar kind, performed on the scapula, the author infers, that union is accomplished in the thick part of the scapula exactly as it is in the cylindrical bones, viz., blood is effused into the different tissues surrounding the fractured part; this blood is next absorbed, and coagulable lymph deposited in the substance of the muscles and in the neighbouring cellular tissue, so as to form them into a solid gelatinous mass. The periosteum, which has been ruptured, is separated from the fractured edges, inflamed and thickened, and lymph is effused between the fragments themselves. At a later period the external mass decreases in size, the muscles return to their natural texture, and a fine layer of cartilaginous matter surrounds the fractured spot, with which the periosteum is so completely blended, that it is difficult to say whether it is external to, or beneath it. This callus adheres firmly to the surfaces of the bones, and dips down between the fragments. Ossification then takes place by the deposition of earthy particles in the cartilaginous matter; which particles are deposited irregularly through all parts of the provisional callus at the same time, and do not appear first at that part which is next to the surface of the bone. The process of union of fractures in the flat part of the scapula, differs somewhat from the process here described. In speaking of the part which the periosteum plays in the production of the callus, the author observes, that where two fractured portions of a flat bone overlap each other, and the edges, which are in contact, are denuded of their periosteum, union takes place between the opposed surfaces, through the medium of the fibro-cartilaginous substance, which becomes osseous, and possesses all the characters of the common external or provisional callus. The matter must here arise from the surfaces of the bone itself; and this fact shows that the provisional callus may be generated independently of the periosteum.

The author denies, in opposition to the opinions of Macdonald and others, that the cartilaginous matter differs from true cartilage, in becoming tinged red when the animal has been fed on madder.

Mr. DALRYMPLE had witnessed many of the experiments performed by Mr. Cooper on the mode of union of fractured bones, and which had been published in the "Guy's Hospital Reports." The result of Mr. Meade's experiments had fully borne out the conclusion to which Mr. Cooper had arrived, viz., that there was little difference in the mode in which union was effected in fractures of the flat and cylindrical bones. There was a point to which he (Mr. Dalrymple) wished to allude in reference to these investigations. In all the experiments he had seen, or read of, he believed the limb had never been injected with the view of ascertaining from whence the vessels arose which were the source of the ossific deposit by which the parts were united. He recommended this mode of proceeding to be adopted in future experiments. Mr. Meade's experiments were interesting, as showing the mode of union in fractures in which the bone had been injured to the least possible extent.

Mr. MEADE had, on several occasions, injected the limb, the bone of which had been fractured, in the course of his experiments; he had done this with the view of ascertaining the extent of vascularity of the callus, rather than to ascertain the source of the vessels which supplied it. He had found them, however, to proceed from the periosteum, the muscles, and other adjacent structures. He believed that Velpeau, in his last work on anatomy, had described three or four sets of vessels as being present in these cases; these ramified in the various structures of the bone, and, according to the difference in their arrangement, he drew his conclusion as to the different modes in which union was effected in different bones.

Dr. KING inquired whether any experiments had been made on the bones of the face, and whether the mode of union in these was the same as that in the other flat bones.

Mr. MEADE had, on several occasions, fractured the nasal bones of the rabbit, and they united in the same way as other flat bones.

Mr. MAYO could relate one fact in corroboration of the statement of the author of the paper, that the general opinion of the necessity of provisional callus, in all cases of fracture, was erroneous. A lad, about eighteen years of age, fell from a hayloft,

and fractured some of the bones of the head. He recovered from this injury; but, at the end of fourteen weeks, died from other causes. There was no provisional callus present, but the bones had become united by osseous union.

Account of a Case of Aneurism, supposed to have opened into the Pericardium a considerable time before Death. By T. THOMSON, *M. D., Physician to the Northern Dispensary, London, &c.*

About the middle of the year 1838, Richard Tofield, a blacksmith, of strong muscular frame, was seized with pain in the back and side; after which he continued to suffer from palpitation, and fainted occasionally at his work. From the beginning of June, 1839, he was several times visited by Mr. Bird, the house-surgeon of the Northern Dispensary, who found irregularity of the pulse most observable on the right wrist, with prominence and pulsation of the right side of the chest. On July 21, 1839, Dr. Theophilus Thomson visited him, and found him lying in bed with his lips and ears livid, skin perspiring, and anxious countenance.

In September he became worse, and on the 19th was found again confined to his bed, with great lividity of countenance and rapid pulse. By change of treatment his pulse became regular, and the expression of his countenance cheerful. He continued better till the 29th of September, when, on getting up to relieve his bowels, he became suddenly worse, stared wildly for a moment, uttered an exclamation, and fell back, dead.

On opening the body, the pericardium was found distended with a prodigious quantity of blood, so that the heart was not without difficulty discovered. It was enlarged, flaccid, and greatly displaced, so as to explain the peculiarity of the sounds remarked before death in different parts of the chest. The pericardium also presented marks of considerable disease, both old-standing and recent. The aorta, near its origin, was dilated to more than twice its ordinary size; and two or three inches above the aortic valves, was discovered an orifice by which the blood must have escaped into a cavity the size of an orange, from whence it passed into the pericardial sac. The author then states his reasons for thinking that the rupture into the pericardium had taken place some considerable time previously to death; and refers to Laennec, as giving countenance to the opinion that life is not necessarily terminated immediately, by such an effusion.

Account of a Case of Spontaneous Rupture of the Heart into the Pericardial Sac, under which Life continued for about Ten Hours. By W. STROUD, *M.D.*

Fred. P., aged 29, after anxiety and vexation endured for a considerable time, and after having been liable to profuse bleeding from the nose during the spring season, for many years, was, on the non-occurrence of this bleeding, subject for six weeks to a sense of fulness in the head, with lassitude and somnolency.

On the morning of April 27, 1839, after having returned from Covent-garden market, he was seized with faintness, giddiness, vomiting, and insensibility. The pulse became imperceptible, and he was, apparently, in a dying state. He was promptly bled by Mr. Symes to three pints: recovered a little, continued complaining of great tightness of the chest and weight at the heart, but died the same evening.

The pericardium contained a quart of blood, which had escaped through an opening in the right auricle, just below the insertion of the vena cava superior; the edges of which were not attenuated, or apparently ulcerated. The author accordingly suggests the prudence of relieving plethoric oppression, even where signs of structural disease in the sanguiferous system are not evident. In this patient the heart was large, and loaded with fat.

Mr. DALRYMPLE had seen three cases of rupture of the left ventricle of the heart. In two of these cases death occurred instantly; in the other instance, which was under the care of Dr. Farre, the patient lived eight days after the heart was first ruptured. The patient was a married woman, who lived very unhappily with her husband. During an altercation with him, at a public-house, she became much excited, and fell to the floor in a fainting fit. Her extremities were cold, and she laboured under all the ordinary symptoms which accompany excessive hæmorrhage. From this state she recovered, was brought home, and Dr. Farre saw her. She then complained of a fixed pain in the heart; this disappeared at the expiration of four or five days, leaving her well, with the exception of excessive weakness. At the expiration of eight days from the first attack, she became again excited in a quarrel, fainted, and did not recover. On examination, the pericardium was found to be much distended with blood, which had become coagulated in two distinct layers; that nearer the pericardium being firmer, and having less colour than the more internal layer. The rupture was situated in the left ventricle near the apex. The orifice was small, so that a probe could be passed into the heart with difficulty, and the passage, which was very oblique in its direction, took a sinuous course through the fibres of the heart. It would appear that the preservation of life, after the first attack, was owing to the coagulation of blood in the muscular structure of the heart, which occurred during the fainting. This was broken through during the

period of the second excitement. In the two other cases, also, the rupture was dependent upon mental emotion.

Mr. ALCOCK related a case in which a musket-ball penetrated the heart, and the man lived for forty-eight hours afterwards. There was but a small quantity of blood found in the pericardium.

Dr. KING recollected a case in which a man, during the time he was robbing a garden, was stabbed with a bayonet; the instrument transfixed both the ventricles of the heart, but the man was able, with a musket in his hand, to jump over two high fences. He then fell down suddenly, and died. Some blood was found in the pericardium.

BRITISH MEDICAL ASSOCIATION,

Exeter Hall, June 2, 1840.

Dr. WEBSTER, President, in the Chair.

THE minutes of the last meeting were read and confirmed.

A letter was read from Lord J. Russell, in answer to one addressed to him by the Secretary, asking his Lordship to grant an interview to a deputation of the Association. His Lordship, in reply, said he should be obliged by the British Medical Association offering their suggestions on medical remuneration in Poor-Law Unions, in writing. A letter that had been drawn up, and addressed to his Lordship, in compliance with his request, was read.

Some conversation took place relative to the Vaccination Extension Bill; after which it was resolved unanimously, "That a deputation, with power to add to their number, be appointed to wait upon Lord Ellenborough, on the subject of the Vaccination Extension Bill."

The PRESIDENT introduced Drs. Nugent and Maunsell, of Dublin, corresponding members of the Association; the latter of whom, he remarked, would doubtless give an account of the last meeting in Dublin.

Dr. Maunsell informed the Council, that their late meeting in Dublin far exceeded his most sanguine expectations, and he was glad to say that unanimity had prevailed. There were about 100 present, 60 or 70 of whom were from distant places, and represented branch associations, or large bodies of men; and he expected there was not a single difference of opinion. They had had a meeting the day before, to draw up the resolutions to be brought forward, so that all went on square and straight. Dr. Maunsell then read the resolutions of that meeting, as printed in the "General Advertizer" of May 30, 1840.

In these resolutions, Gentlemen, said Dr. MAUNSELL, you will recognise many of the principles which regulate this Association. The object of his whole medical career had been to forward the interest of the profession to which he belonged; and he, together with his friend, Dr. Nugent, soon saw the necessity of forming an association in Ireland, which they thought would be better done under the auspices of the College of Surgeons, than by raising up a new structure. A meeting consequently was called, and after five days' discussion they had a majority of eight against them. This trivial defeat determined their next step, and they became an *independent* Association. He (Dr. Maunsell) submitted to the Association three plans of medical reform. The 1st, containing the principles of the representative "*one faculty*" system; the 2nd, based solely on educational reform; and the 3rd, proposing the establishment of a superintending board of control. He had great pleasure in stating that the first was carried without a division. In so important a measure as that of medical reform he quite agreed with his countryman, Daniel O'Connell, that we should not stick upon trifles, but take any instalments we could get; and if any Bill were brought before the House of Commons, he thought that we should endeavour to keep down any unnecessary clamour from unreasonable objecting to any part of it—opposed to our own views—but consider whatever might be obtained, as a stepping-stone to further reform. He considered we had now fairly embarked in the cause; and although it must be a work of time, still we must go on with it, and eventually succeed.

Dr. NUGENT briefly stated that his colleague had said every thing connected with the subject, and he believed there remained nothing further for him to add.

The PRESIDENT hoped that Dr. Maunsell did not mean to say we must take *any* thing that was offered. He observed, that two other gentlemen (members of the Council) and himself, had had an interview with Mr. Warburton at the House of Commons. The honourable gentleman received them, and very frankly communicated his views, which, as he engaged very soon to submit them to the House of Commons, it would, perhaps, not be right to detail.

Professor GRANT thought it was highly desirable to obtain unanimity, for if there were a difference of opinion among medical reformers themselves, how could Members of Parliament frame a satisfactory Bill. He thought Dr. Maunsell's observations must be highly satisfactory to the British Medical Association. He would therefore move, "that a vote of thanks be offered to Dr. Nugent and Dr. Maunsell for their valuable communication," which was carried unanimously.

The learned gentlemen briefly returned thanks for the compliment.

Mr. BRADY informed the meeting that Mr.

Eales and himself had waited on Mr. Wakley, on the vaccination question, who recommended them to call on Lord J. Russell; that, in answer to a solicitation to that effect, his Lordship requested them to forward to him, in writing, their views on the subject; that they had done so, and requested his Lordship's attention to what was contained in the suggestions.

Mr. SIMPSON brought under the notice of the Council the case of prosecution of the practitioners of the North of Ireland by the Dublin Society of Apothecaries.

Dr. HURST, one of the deputation from the practitioners of the province of Ulster, explained the grievances, and read the document which was printed in THE LANCET of last week. A very lengthy discussion then ensued, in which Drs. Webster, Thomson, M. Hall, Maunsell, and Granville, and Messrs. Farr, Rendle, Evans, Eales, Davidson, Brady, and Howell, took part. During the discussion the following was moved by Dr. M. Hall, and seconded by Mr. Simpson:—

"That we enter fully into the injustice of the attack on our brethren in the North of Ireland, and are ready to do all in our power to assist them; and

"That we do, nevertheless, entirely disapprove of professional gentlemen keeping open shops for the selling of drugs."

Owing to the lateness of the hour to which the discussion had extended, the motion was not put to a division, a motion of adjournment having been carried.

The meeting then adjourned until June 16.

SOLITARY CONFINEMENT AND THE SILENT SYSTEM.

To the Editor of THE LANCET.

SIR:—In the last number of your very valuable and widely-circulated Journal, my friend Mr. Simpson, of 110, Guildford-street, referred to a "work" on the subject of solitary confinement as a criminal punishment, requesting extracts in reference to a system as yet but little known, but now contemplated, in this country. The work to which he refers, is the Annual Reports of the Prison Discipline Society of Boston, U. S. If you think the publication of the following short extracts likely to set inquiry on foot, on a subject which will soon be of considerable interest in England (as preparations are making by Government for carrying the system into effect), they are at your service. I am, Sir, &c.

WM. WILSON, R. N.

55, Upper Charlotte-street, Fitzroy-square,
June 9, 1840.

The Auburn, or New York, system of solitary confinement by night, and silent day work in shops, seems from these reports much preferred to the Pennsylvanian plan, or, solitary confinement night and day, with the prisoners labouring in their cells.

Dr. Rockwell, of M'Lean Asylum, in his report of 1838, says, "Fourteen cases of dementia have occurred, from masturbation, in one institution, in a single year, among criminals confined on the day and night solitary system. Dementia is, when there is a defect, or hebetude of the understanding, accompanied by an impaired or total loss of memory, and an incapacity of fixing the attention on any subject. The tendency of masturbation is to produce dementia; on the other hand, persons in a demented state are apt to practise it: it is the natural tendency of the solitary cell to produce an increase of both."

The Report from the New Jersey State Prison says—"The effect of solitary confinement upon the mind deserves some notice. In many instances, there is remarked that weakness of intellect which results from an unexercised mind. The nervous system must suffer with the other parts of the body. If the prisoner on his admission into the cell have not been of a reflective character, and have a mind capable of exercising itself, imbecility is soon manifested, which leads him to amuse himself in the most childish employments.

"There is a practice in which many of the prisoners indulge, and which it seems impossible to prevent, I mean masturbation. It is not confined to our penitentiary—it is the vice of solitary confinement. Apart from observation, they give up to their depraved propensities, and in a short time produce a very obvious effect upon the system. But it is then too late to warn them against the consequences; the mind has lost its control over the passions, and they become imbecile, or maniacal. Of the causes of mental derangement now in the prison, almost all of them can be traced to this abuse. One destroyed himself by it. The period of continued separate imprisonment, previous to mental disorder, is very short.

"Of eighteen cases, it occurred in ten in less than one year. The longest being eight months and five days, the shortest only thirty-nine days. The average five months and twelve hours. Of the other eight, the average is two years and nine and a half days.

"Among the fondest anticipations of the friends of solitary confinement, one of the most prominent was, that it would prove such a terror to bad characters, as greatly to lessen the number in confinement. Your keeper in his report candidly admits that this anticipation has failed to be realised. The number of commitments are quite as great in this State and in Pennsylvania, as in New York, Connecticut, or Massachusetts."

THE LANCET.

London, Saturday, June 13, 1840.

Once more we beg to draw attention in this place to the Bills relating to Vaccination and Inoculation for Small-pox, which are at present before the House of Commons. They will both come on for discussion in that assembly on Wednesday next, the 17th instant; and, as it is quite certain that the House will be much influenced by the inclinations of the Profession, according as they may predominate in favour of either measure, petitions on the subject should not cease to be poured in, care being taken that they be in the hands of those Members who are to present them on or before that day. In voting and framing the petitions, it should be distinctly remembered, that the Bill which has been sent to the Commons from the Lords, under the name of the Vaccination Extension Bill, is framed to place Vaccination under the regulation and control of the Poor-Law Commissioners. The Bill which has been introduced by Mr. Wakley, called the Small-pox Prevention Bill, is for placing Vaccination, so far as it may be possible, in the hands of medical practitioners themselves. Whatever efforts, therefore, are made, by petitioning, to prevent the passing of the one Bill, and to promote the passing of the other, should be made instantly,—that is, without the delay of even a single hour. Short petitions,—petitions on a sheet of foolscap paper,—petitions with even only a single signature,—may answer the purpose,—scores of petitions, a crowd of petitions,—petitions enough to manifest an unanimous opinion, if it exist. But they should all be in the hands of members, so as to be presented on or before Wednesday next, the 17th instant. Need we urge that they should pray the House not to pass the Bill which has been sent from the Lords, and that, at the same time, the Small-pox Prevention Bill may be enacted into a law?

An examination of the newspapers for some facts relating to the origin of the Vaccination Bill, which has been sent from the House of Lords, brings to view the following conversation. It shows that the Poor-Law Commissioners pretty quickly acted upon a "hint" put forth in that branch of the Legislature. Within three weeks from the time of this discussion, the Commissioners placed the Bill in the hands of Lord Ellenborough. After this evidence, there can be no doubt as to the very pen from which the document had its birth. The report appeared in the morning papers of March 11, 1840. Every one of the twelve hundred gentlemen, who signed the memorial presented by Lord Lansdowne, are bound, in duty to themselves, to be at the trouble of now addressing the House of Commons against the mischievous measure which their petitions seem, accidentally, to have saddled upon their unfortunate profession. They could little have suspected of what a Bill it would become the father. With regard to their first object in petitioning, we have simply advanced one step, in proposing that inoculation for small-pox should become penal in legally-qualified medical men, as well as in empirics, at the same time framing the new Bill, according to the emergencies which exist for the extension of Vaccination on sound and legitimate principles.

VACCINATION.

The Marquis of Lansdowne wished to call the attention of their lordships to a petition which he held in his hand, and which had reference to a matter of deep importance to the community at large, and to their lordships, as being anxious for the health and comfort of their domestic circle. The petition related to vaccination, and to the necessity of taking some measure to prevent the spread of small-pock by inoculation. The petition spoke the opinions of 1200 medical practitioners of this country, including in that number many individuals of the greatest eminence. It contained opinions which were well worthy the attention of their lordships. He would impress on the higher

classes of society the necessity of discouraging, by every means in their power, a practice—that of inoculating for small-pock—by which so great an amount of misery and wretchedness was created; and of encouraging vaccination to the utmost extent, by which, finally, they might hope to extinguish one of the greatest pests of humanity.

The petition was then read at length.

Lord ELLENBOROUGH agreed in the observations of the noble marquis, as to the necessity of encouraging vaccination. He thought that the object of the petitioners might be effected *by adding a clause to the Poor Law*, to enable the guardians of the poor to enter into a contract with the medical men of the respective unions to vaccinate the children of the poor.

The Marquis of LANSDOWNE said, that *no doubt the poor-law commissioners would attend to the suggestions which had been thrown out.*

The Marquis of NORMANBY said, that he would devote his early attention to the subject.

After a few words from Lord COLCHESTER and the Earl of HADDINGTON, the petition was laid on the table.

THE Registrar of the "London University" has reported to the House of Commons, in a Return dated the 2nd of June, that in the last year the Examiners received from the Treasury £1892 for their labours, namely, the granting of 31 degrees in Arts, Medicine, and Laws, matriculating 30 candidates, and sitting in judgment upon "26 candidates "*examined* for the first *examination* in medi-"cine." Whether this latter statement derive its peculiarity from a new style of writing, or correctly express some stage of the nonsensical scheme of "examination" adopted in the University, we know not. Of the above sum, £725 were received by the Medical Board, consisting of Drs. TWEEDIE, BILLING, TODD, ROGET, and LOCOCK, and Messrs. KIERNAN and PEREIRA,—gentlemen, the majority of whom have no claim for employment in the public service, and two or three of whom, being weighed in the balance and found wanting, have this year been sent to the right-about, with no chance of again possessing the opportunity of trifling with the interests of medicine in this institution. Should they again attempt to recover their mischievous position, the Earl of BURLINGTON will be requested, probably by Lord BROUGHAM, to make certain disclosures relating to their fairness for such places of trust, involving the examination and award in the case of Mr. MACKENZIE and his companions. The feeling which the proceedings of 1839 have created amongst the guardians of the national purse in Parliament, were manifested in the present session by a refusal, hitherto, to grant any salaries in the University. These and other facts, indicative of the public dissatisfaction with the principles and management of the "liberal" institution, have, however, had a good effect on the Senate; for we understand, that, seeing the total failure of their plans, modelled as they have been on those of the old and corrupt establishments, the claims of knowledge and talent are to be boldly recognised, by the prompt admission to examination degrees, come whence the candidates may, and empty-handed of "certificates."

MR. WAKLEY has received for presentation to the House of Commons, a Petition from 17 Physicians and Surgeons of CARLISLE (Cumberland), "most cordially concurring" with the provisions of the Small-Pox Prevention Bill, and praying that similar measures may be made to extend, if practicable, to every part of Great Britain and Ireland.

THE ENFORCEMENT OF VACCINATION BY LEGAL ENACTMENTS.

To the Right Hon. Sir JAMES GRAHAM, *Bart., M.P.*

SIR:—With equal sincerity I avow my accordance with the principles of legislation which you have heretofore adopted, and presume to address you on the substance of the Bills introduced into the House of Commons, on a subject of vital importance. The professed object both of the *Variolous prevention* and the *Vaccine extension* Bills, is the conservation of the people's health; the one by the prevention of an evil, the other by the extension of a good. They are, of course, intimately blended; it is equally essential to withhold a poison, as to apply an antidote; and yet the contrasted modes of coercive legislation for the one, and of

moral conviction, or inducement, for the other, have been proposed and adopted even in the Bill of the Hon. Member for Finsbury, which, on all other points, is so well adapted to effect this national object. It is confessed that legislation is essential to insure the *negative*, the prevention of variolous contagion; and why not for the *positive*, the extension of vaccination? without which the first will be but a half measure, and by its defect the importance and scope of the Bills will be destroyed.

The legislators who would argue for the establishment of quarantine to arrest the progress of plague; of pest-houses to prevent the march of small-pox; and, forsooth, of the drawing of a triple cordon to surround the localities of the non-contagious cholera, will stigmatise as *unconstitutional* the enactment of a law against the inoculation of a virulent poison, between which and the pestilence which walketh abroad there is often but a difference *in kind;* by which inoculation a focus of malignant influence is created, which may infect thousands, and destroy hundreds. And if variola be communicated, *in default of vaccination*, where is the mighty difference? The enforcement of vaccination is but to *compel* those whom you cannot *impel*, *to receive a good*—to protect ignorance against itself to legislate for those who with the blindness of prejudice would else legislate for themselves, and enact a statute fraught with danger and mortality.

The debateable point will not be, perhaps, the *enforcement* of vaccination; but, I believe this to be an essential feature in the measure. The only mode efficient for the removal of false objections, as the correction of that vital error in the Lord's Bill of investing the Poor-Law Commissioners, is essential to obviate the occurrence of *failures*.

I believe that more has been done in the infirmary to which I am attached, to overcome prejudice, and convert the mothers, than in any other institution, the blessings of vaccination being constantly explained to them when in a grateful mood. They are made to understand that at least 95 children of 100 are rendered insusceptible (by careful vaccination) of variolous infection; and that if it do occur in the remaining five, it is of a milder character than natural small-pox caught without previous vaccination. Above all, that medical men, almost without an exception, vaccinate their own children.

But it is chiefly from the ignorant *husband* that these objections emanate, and he is out of the pale of remonstrance. Until, however, these objections are extensively removed, it is doubtful to me whether gratuitous orders will often be *demanded* by parents of the overseers or guardians. And if they be demanded, the Bill sent down from the Lords will go far to thwart or neutralise all its apparent benefits. The Poor-Law Commissioners, who know little of the pathological essence of the question, will conspire to take the duties from the hands of practical and scientific discrimination, and place them in those of inexperience or ignorance. By this will be still further multiplied, as will the instances of *failure* in the process of vaccination, which have so often caused the lofty hopes engendered by Dr. Jenner to be disappointed, and are indeed the grand impediment to the universal conviction of its value.

It is sometimes difficult, even for experience, to discriminate between pure and spurious influence. To draw the delicate line requires patient, and protracted, and careful records. How much more then will this apply to the terrors of the Union innovation. I would not advocate the compulsory legislation on slight knowledge, or without mature reflection; but I have found that where children have died of natural small-pox, the mothers have constantly bewailed that they had not taken my advice of vaccination; and they will often flock for vaccination when malignant small-pox has ravaged a crowded court or alley; and it is at this moment that mothers (whose children have escaped, and on whom I had almost forced the process of vaccination,) have been lavish in their warmest expressions of gratitude.

I have thus, Sir, at the eleventh hour, ventured to state merely a tithe of what I feel to be the truth regarding this question; and this my humble hope, that the jealousy of party may not blind the judgment or warp the feelings of those who are to decide on a great national and not a political question; so that the Legislature may combine with the philanthropists of our profession to destroy a scourge, and extend one of the greatest blessings of our age. I have the honour to be, Sir, your obedient servant,

WALTER C. DENDY.

Stamford-street, June 8, 1840.

*** At the request of Mr. DENDY, we insert the foregoing letter, but not—as in an accompanying note, he hopes—with an approval of the object for which he wishes to obtain the support of Sir JAMES GRAHAM. If the Legislature may compel every newborn child to be submitted to a surgical operation, at what limit of outrage upon the feelings, the liberty, or the will of human beings, shall it stop, when once the excuse of a public benefit is set up in favour of some particular tyranny? Many things are desired for the general good, which yet must not be enforced by law. Let some philanthropist resolve that circumcision is sanatorially and religiously imperative through-

out the Christian community, backed in his opinion by all the learned and scientific men in the kingdom. He might preach the doctrine, with the consent of the State, at every corner-stone in the land; but power to fix an operator in every parish, and to fine or imprison every parent who submitted not her offspring to his knife, would be a monstrous power, and palpably, odiously, and disgustingly repugnant to every free and discreet mind. The Jews are reconciled to the process as a religious obligation. In the days of extreme mental subjugation, probably, it was instituted. But neither this, nor any other surgical operation, would, on any plea, be lain down to by the British people, at the bidding of the Legislature. No. The English community will not thus be treated. The very proposition in Parliament would amount to a warrant for a revolt beyond its walls. Our esteemed correspondent may be content. Vaccination will, by and by, be the voluntary rule of society in this country. The measure which we contemplate will put into operation influences in favour of vaccination, which,—at present, perhaps, unrecognised or unforeseen by those who advocate compulsion,—will eventually accomplish all that is desired.

BIRMINGHAM GENERAL HOSPITAL.

Few are now ignorant of the delusive manner in which the Hospital and Dispensary Reports are too frequently drawn up in this country; they are not exceeded as puffs by the advertisements of the vilest quacks. The following striking illustration is from a letter of Dr. Davies, which we have compared with the last report of the Birmingham General Hospital, and found perfectly correct:—

"It has been urged that while the number of medical men to the hospital has been stationary for sixty years, the number of the patients had increased, and the out-patients alone had nearly trebled within the last seven years; and the proof of the fact was extracted from what appeared to be the authentic reports published year by year, under the direction of the Committee and medical officers of the hospital itself. For 1838, the last year, and, therefore, the most satisfactory for reference, the number of out-patients was stated to be 7788. But the General Meeting, prompt to condemn any 'attempt to mislead the public,' has published also some 'important statistical information relating to the General Hospital, furnished by Joseph Hodgson, Esq.,' from which it would appear now, that out of the 7788 which, in the annual report of the last year, flourished under the generic term of out-patients—

537 were merely vaccinated.
1618 had a tooth a-piece extracted.
57 only made application to be bled.
667 had cut their fingers, or sustained some slight injury of that sort on the extremity.
1332 had affections too insignificant to require any attention at all from the surgeons.
522 were cases of which the nature has not been specified, a certain proof that they were not of much consequence; and

1061, who passed muster well as out-patients until the figures were quoted as realities, we are now gravely told, were 'errors in the register, seen by reference to date January 16, and various other dates.' It would appear they were a sort of ideal out-patients—airy phantoms of the mind in point of fact—only substantial to open the purses of the benevolent, but totally incapable of the more corporeal processes of addition, subtraction, multiplication, or division, among the medical staff; for all but the annual report they were negative quantities. The document which has thus enlightened us is truly a most 'important' document, because it affords an insight into the mode in which such reports of the General Hospital have been hitherto manufactured; but how far it is to be regarded as 'statistical' information, or calculated to raise the character of such reports with the more accurate statists of this country, I leave you and the public to judge. I confess that, for myself, any attempts to found arguments upon such data will henceforth appear to me most futile; nor would I ever have attempted to quote them, had I not erroneously supposed that the reports of the hospital, prepared, printed, and published with the sanction, both of the medical officers and the Committee, were implicitly to be relied on. What are we to trust for the future; if, when the figures do not quadrate with the purpose of the day, a large number, no less than a seventh of the whole of those in the very last year designated as out-patients, are to be extinguished as apocryphal, as mere non-entities in fact? Who shall affirm that the unscrutinised figures of any former year have been more correct? or who will be bold enough to assume that even the financial statement of expenditure, the pounds shillings and pence, enormous as they before appeared, even in reference to the totals that comprehended *all* these cases—the insignificant as well as the imaginary—is a whit more worthy of credit?

"From the 'important statistical informa-

tion,' it would appear that, in 1838, the total number of in and out-patients requiring medical and surgical aid, was, in reality, but 2502; viz., 1240 requiring the aid of the surgeon, and 1262 requiring the care of the physician. But this small aggregate, with a little dispensary sort of relief to a few others, in a rent-free, tax-free building, cost no less than 5171*l*; and, as if to conceal the fact, by the aid of tooth drawing, vaccinating, cut fingers, and other cases too insignificant to be recorded, together with 1061 cases, altogether without foundation in fact, we were presented with a supposititious total of 2198 in, and 7788 out-patients; a gross aggregate of 9986. This is the only use of the figure hyperbole it has ever been my lot to witness in a record professing to be purely statistical.

BOTANICAL GARDEN AT KEW.

The Report of Professor Lindley upon the present condition of the Botanical Garden at Kew, contains the following observations, which are well deserving of attention:—

"So far as the mere cultivation of this place is a subject of observation, it is due to those who have charge of it to say, that it does them credit, considering the crowded state of the houses, and the inadequate funds allowed for its support.

"It is impossible to speak of the general management in similar terms. It has always been maintained as the great botanical garden of this country, and, whether, as a private or as a public establishment, it was the duty of the officer entrusted with its administration to render it effective to the extent of his means as a Botanical Garden, that is, as a garden of science and instruction; yet no kind of arrangement (one of the first features in a Botanical Garden) has been observed; no attempt has been made, till lately, to name the multitudes of rare plants it comprehends, and thus to render it a place of public utility: no communication is maintained with the Colonies, nor any other thing done, so far as can be discovered, to fulfil the objects of its institution, except to raise the seeds which government collectors and other persons have profusely contributed, and then to take care of the plants.

"It is admitted that there is no classification observed in the garden.

"What names are to be found in the garden have been furnished by Mr. Smith, the foreman, and the Director does not hold himself answerable for them. This was most particularly inquired into, and most distinctly avowed; so that by far the most difficult part of the duty of the principal officer—a duty on the perfect execution of which the credit and utility of the garden essentially depends—a duty which can only be executed properly by a man of high scientific attainments, aided by an extensive herbarium and considerable library; this most important duty is thrust upon a foreman, paid small weekly wages for cultivating plants, who, whatever his zeal and assiduity may be (and in this case they have been such as to deserve the greatest praise), has no sufficient means of executing such an office. * * * *

"Visitors are unreservedly admitted to the garden daily, except on Sundays, and Mr. Aiton deserves credit for having exercised his power, as director-general, in order to secure this privilege to the public. It is, however, not easy to discover what advantage, except that of a pleasant walk, has been derived from the privilege in the past state of the garden." * * *

Dr. Lindley "recommends that the Lord Steward be relieved from the burthen of this garden, unless it should be Her Majesty's pleasure to retain it. If the Botanical Garden of Kew is relinquished by the Lord Steward, it should either be at once taken for public purposes, gradually made worthy of the country, and converted into a powerful means of promoting national science, or it should be abandoned. It is little better than a waste of money to maintain it in its present state, if it fulfil no intelligible purpose, except that of sheltering a large quantity of rare and valuable plants.

"The importance of public botanical gardens has for centuries been recognised by the governments of civilized states, and at this time there is no European nation without such an establishment, except England. The most wealthy and most civilized kingdom in Europe offers the only European example of the want of one of the first proofs of wealth and civilization. France, Prussia, Austria, Bavaria, Russia, Hanover, Holland, not to mention smaller governments, have all botanical gardens, liberally maintained with public funds; and, what is more curious, Dublin and Edinburgh have similar establishments, to which grants of public money have been liberally furnished; but London has nothing, except a small garden at Chelsea, maintained by the funds of a private corporation. Now that a great number of students are annually collected in London for the purpose of study, it has become indispensable that such means of instruction as a botanical garden affords, should be provided. It appears, from returns obtained from the Society of Apothecaries, that annually, on an average of the last three years, as many as 433 medical students have been registered as attending lectures on botany in London: they are compelled to attend these lectures, not only by the Apothecaries' Society and

the College of Surgeons, but by the regulations of the army and navy; and yet this large number of young men studying the most important of professions, is practically deprived of the advantages of referring to a botanical garden, without which it is impossible that their studies can be prosecuted efficiently. It is true that there is a Botanical Garden at Chelsea, belonging to the Apothecaries' Society; but it is not to be expected that the funds of such a corporation, however liberally disposed it may be, should suffice for the maintenance of such a botanical garden as the wants of students render necessary.

"But this is only one out of many reasons why a National Botanical Garden should be maintained by Government near London.

"There are many gardens in the British colonies and dependencies: such establishments exist in Calcutta, Bombay, Saharunpur, in the Isle of France, at Sydney, and in Trinidad, costing many thousands a year: their utility is very much diminished by the want of some system under which they can all be regulated and controlled. They are in a similar condition to the Royal Forcing and Kitchen Gardens, already disposed of; there is no unity of purpose among them; their objects are unsettled; their powers wasted, from not receiving a proper direction; they afford no aid or assistance to each other, and it is to be feared, in some cases, but little to the countries in which they are established; and yet they are capable of conferring very important benefits upon commerce, and of conducing essentially to colonial prosperity.

"A National Botanical Garden would be the centre around which all those minor establishments should be arranged; they should be all under the controul of the chief of that garden, acting in concert with him, and through him with each other, reporting constantly their proceedings, explaining their wants, receiving their supplies, and aiding the mother country in every thing that is useful in the vegetable kingdom. Medicine, commerce, agriculture, horticulture, and many valuable branches of manufacture, would derive considerable advantages from the establishment of such a system."

MILBANK PENITENTIARY.

The Superintending Committee of the General Penitentiary have addressed a letter to the Marquis of Normanby, in which the following passage occurs:—

"In the Inspectors' Report, they state,—'That the general health of the prisoners in the Penitentiary is very unsatisfactory,' and they introduce some tables to prove the extent of the sickness. But the Committee submit that those tables are constructed on an erroneous principle; every death and every pardon, and removal on medical grounds, and every case in the Infirmary which occurs among the total number of prisoners confined in the course of the year, is stated in those tables; but the per centage is calculated, not on such a total number of prisoners, but on the average daily number throughout the year. If the former principle of calculation had been adopted, the per centage of deaths, pardons, and removals last year would have been reduced from $9\frac{1}{2}\frac{3}{5}\frac{7}{1}$ (the amount stated by the inspectors) to less than six per cent. The average daily number of prisoners last year was 442; the total number in the course of the year was 704. Now the effect of taking 442 as a fixed number, whilst the individuals composing that number were continually changing, has been to charge that number with all the disease which really happened among the whole 704. The Committee do not pretend, that in strictness the per centage should be calculated on the total number 704, the population of a prison being fluctuating, at the same time that they point out the extreme incorrectness of the principle adopted by the inspectors."

The mode of calculation adopted by the inspectors was correct. The mortality of prisons can only be deduced from the average population and the deaths. At the same time the term of residence should be noted as an important element. The Middlesex magistrates have been boasting not a little, at a late meeting, of the low mortality in the prisons under their inspection, and have raised a great clamour on the subject of the high rate of mortality in the Penitentiary. Now, what is the fact? Why, simply that the prisoners remain a few weeks in the House of Correction, and leave it before their health is finally impaired. But the seeds that are implanted there, bear fruit in the prisons and hulks where the criminals are finally lodged. The prisoners in gaols remain, on an average, 48 days; and the mortality is 16 in 1000; in the hulks, the mean term of detention is 1 year; and the mortality is 28 in 1000.

That the situation of the Milbank Penitentiary is bad, cannot be disputed; but imprisonment in any place invariably injures the health. The Penitentiary system—involving imprisonment in cells—would produce a high rate of mortality among the prisoners. It has been shown by incontrovertible statistical facts, that imprisonment now destroys ten times as many lives as the executioner in this country.

LIBERAL ARRANGEMENTS IN THE NEWCASTLE-ON-TYNE INFIRMARY.

To the Editor of THE LANCET.

SIR:—On reading your remarks on the pamphlet respecting the Birmingham Infirmary, I have been a good deal struck by the contrast between the terms of admission at that Institution and at the Infirmary of this place.

Our hospital contains about 160 beds, which are generally fully occupied; but although, occasionally, a few additional beds may be prepared (which the wards will very well permit, as they are never crowded) two patients are never placed in the same bed. The dressing is, generally, altogether performed by the private pupils of the surgeons of the establishment, who are four in number, an equal number of physicians, and a house-surgeon, make up the medical staff.

Pupils are admitted to see the practice, medical and surgical, of the Infirmary, for a fee of five guineas per annum, which is appropriated, not to the benefit of the surgeons, but to the purchase of books for a professional library, to which the pupils have free access, being allowed to take out any books, under certain reasonable regulations. I may add, that during the winter clinical lectures are given by the surgeons in rotation, for the benefit of the pupils, from whom no fee is required for attending them.

The Operating Theatre, where operations are frequent, is open to the pupils, and to all medical practitioners who may feel disposed to witness them.

As regards liberality and facility of access, whether to pupils or other members of the profession, I believe the Infirmary of Newcastle will bear a favourable comparison with any hospital in the kingdom, while to the surgeons of the Institution, no emolument whatever arises from fees of admission. A tolerably successful school of medicine has been established here, for a few years, which, though not immediately connected with the Infirmary, excites no jealousy amongst its professional officers. Your obedient servant,

T. M. GREENLOW.

Newcastle-upon-Tyne, May 23, 1840.

APOTHECARIES' COMPANY, DUBLIN.

To the Editor of THE LANCET.

SIR:—In the account of the proceedings of the "British Medical Association," as reported in THE LANCET of last week, there are certain statements made in reference to the "Dublin Company of Apothecaries," which, as Secretary to the Company, I feel myself called upon to contradict.

I therefore request you will allow me, for the present, to disabuse the minds of your readers of any unfavourable impression which these statements may have occasioned, by giving this a place in your next Number; and, in the mean time, I will take care to forward to the "Association" such documentary evidence as will completely demonstrate their incorrectness. I remain, Sir, your obedient servant,

CHARLES HENRY LEET, M.D.

Dublin, Stephen's Green West,
June 4, 1840.

NOTE FROM DR. HURST.

To the Editor of THE LANCET.

SIR:—There is no established chair of "Medical Jurisprudence" in the Royal Belfast Institution. By the authority of the Joint Boards of Managers and Visitors I gave a course of lectures (the first ever delivered there) on "Medical Jurisprudence and Police," in the Common Hall of the Belfast Institution, during the last spring, to a class of thirty young gentlemen, which lectures have been officially recognised by the Dublin Apothecaries' Hall, as well as by several other licensing bodies; but whether they shall be repeated or not, will depend entirely on future arrangements.

I have deemed this little piece of information necessary, in reference to a statement regarding me in your last Number, otherwise I would not have intruded myself on your notice at the present time. At a future period I may have something to say anent the present conduct of the Dublin Apothecaries' Company, and their abettors, apologists, and informers. Meanwhile, I remain, your grateful and obedient servant,

CHARLES HURST, M.D., &c.

London, June 8, 1840.

PREPARATION OF ACETIC ACID.

To the Editor of THE LANCET.

IN the "Remarks on the Pharmacopœia of the Royal College of Physicians, Edinburgh, 1839, by Mr. Richard Phillips, F.R.S." ("Medical Gazette," No. 33), the following occur on the directions for preparing the acedum aceticum:—

1stly, "I have attempted to follow this process, and if (which I very much doubt) any one else ever did, he must, I think, have found that it is much more easy to fail than to succeed in it."

2ndly, "I have not been able to find this word (*accrete*) in any dictionary which I have consulted."

3rdly, "Such, indeed, is the tenacity of this mixture, that cases may arise in which it may be usefully employed as a cement."

Lastly, "The process is to be strongly condemned for its inconvenience and expense."

That Mr. Phillips has failed does not surprise me, after the novelties which he has exhibited to the world in his Translations (so called) of the London Pharmacopœia,—exhibitions which the Edinburgh College had prevented, by causing the Pharmacopœia of that College to be printed in English.

To find the word "accrete," I refer Mr. Phillips to the dictionaries of Crakelt and Walker. *Accretion* will occur "after concretion and pulverization." I have adopted this process during some years, and *have never failed*. The tenacity of the mixture is such, when properly managed, that it is useless as a cement, and I am of opinion that the process is to be commended. I admit that the quantities employed by me are upon a different scale from those used by Mr. Phillips. Instead of 140 grains, I invariably use 84 pounds of the acetate, and experience no "difficulty in clearing the apparatus for a second operation."

Mr. Phillips is equally unhappy in his remarks on the acidum aceticum, S. L. I remain, most respectfully, Sir, your most obedient servant,

GEORGE WHIPPLE.

22, Garnault-place, Clerkenwell,
June 8, 1840.

RATTLESNAKES DESTROYED BY HOGS.

To the Editor of THE LANCET.

SIR:—In your Journal, Vol. I, 1839-40, page 497, with regard to the article "On the Bites of Poisonous Snakes and Remedies," allow me to state, that when I was in the United States of America, it was a common practice among the farmers to turn their hogs upon those lands which were infested with rattlesnakes, which reptiles were very soon destroyed and eaten. In rocky districts, the rattlesnake will retreat into holes, which are as closely watched by the hog, as a terrier would watch a rat's hole, the hog remaining until hunger compels the snake to quit and be killed, which the quadruped is not long in effecting. No harm ever results to the hog from being bitten, though I suppose, of course, that the bite is a common occurrence. Whether the mass of fat under their thick skins, or the thickness of the skin itself, protects them, must be a matter of conjecture; but might not a knowledge of this circumstance be turned to account by those who have been wounded by any poisonous reptile,—applying, for instance, a cataplasm of hogs' lard to the part, spread on linen, before the virus has been absorbed into the system. I have the honour to subscribe myself, VIATOR.

Bath, May, 1840.

EPIDEMIC IN THE RIFLE BRIGADE.

"THE epidemic which has laid up so many of the privates of the Rifle Brigade, still prevails to a considerable extent. Upwards of seventy of them are now in the hospital, and every day is adding to their number. Some of the officers were affected with it, but we believe they are all now completely recovered."

*** The above paragraph is copied from the "Windsor Journal," and, if correct, calls for inquiry on the part of Government, and the adoption of hygienic measures, of an active kind, for the prevention of the disease. We should infer that the cause of the epidemic must exist either in the situation of the barracks, in the food, or in the accommodation provided for the men.

TEMPERATURE OF PLANTS.

M. VAN BECK, in repeating the experiments of Dutrochet, with the physiological needles of Becquerel and Breschet, and the galvanometer of Gourgon, has observed that the temperature of plants increases until the afternoon, that it then diminishes, disappears almost wholly during the night, and returns on the following day. The maximum of inherent heat on the 29th of September, at a quarter past one o'clock, P.M., in a young leaf of the sedum cotyledon, did not exceed 0° 25 centigrade. In rainy and dull weather, the phenomenon was not so evident as in a calm and clear atmosphere. In these experiments, M. Van Beck's results differed from those of Dutrochet, in finding the living leaf of a lower temperature than the dead leaf of the same plant, when the observations were conducted in the air. When made in an atmosphere impregnated with watery vapour, and beneath a bell glass, the heat of the living leaf was the greatest. Dutrochet explains this want of agreement by reference to his mode of treatment of the withered leaf. After destroying the vitality of the leaf by immersing it in hot water, he dips it immediately into cold water, and keeps it well moistened during the experiment, so that an evaporation equal to that of the living leaf may be continued. If M. Van Beck allow the leaf after immersion in hot water to dry gradually, the evaporation will have ceased, and the temperature in the living leaf be consequently lower than that of the dead when the experiment is made.—*Abridged from the Edin. New. Phil. Journal.*

ICELAND MOSS.

(Cetraria Islandica.)

Dr. Davidson, of Glasgow, received the honorary silver medal of the Society of Arts of Scotland, in December last, for his researches into the best methods of removing the bitter taste an dlichenous odour from Iceland moss. In those countries where this substance forms an article of diet, such discoveries must be highly valuable; and even in our own, it will be important to the practitioner of medicine to be enabled to remedy a frequent and decided objection to its use. According to Berzelius, 100 parts of this moss contain of chlorophylle, 1.6; bitter principle (cetrarin) 3.0; uncrystallized sugar, 3.6; gum, 3.7; apothem of extractive, 7.0; bilichenates of potash and lime, &c., 1.9; amylaceous fibrin, 30.2; and starch, 44.6. M. Westring stated that lichen steeped in a solution of subcarbonate of potash, containing one part of the alkaline salt to sixteen of the moss, for twenty-four hours, would be entirely freed of its bitterness and unpleasant odour. The alkaline solution in this process takes up the sugar, gum, and a portion of the extractive matter, but leaves the starch unaffected. Dr. Davidson finds that the period assigned by Westring, even with this large proportion of potash, is not sufficiently long to effect the required changes, and that liquor potass answers better than the sub-carbonate. His own process consists in cutting the moss into small pieces, and then immersing it in an alkaline solution composed of sub-carbonate of potash and fresh quicklime in equal proportion, and stirring it frequently for a fortnight. It is then drained from the fluid, and washed. The strength of the solution in this case, is one part of potash to twenty-eight of moss. If the process were required to be completed in a shorter space of time, it would be necessary to increase the proportion of potash. A cheaper process is the employment of fresh lime-water, in the proportion of one-fifth or one-sixth of lime to one of moss. The bitter principle in this method appears to be decomposed, for the fluid retains but very little bitterness, and the odour is more completely removed than by the potass. After the action of the lime-water, the moss is hard and reddish-coloured. The hardness may be removed by immersion in water, slightly acidulated with sulphuric acid, which also diminishes the redness. Chloride of lime will remove the odour without affecting the bitterness of taste.—*Abridged from the Edin. New Phil. Jour.*

THE MORBID INFLUENCE EXCITED BY THE MENSTRUAL SECRETION.

Dr. Remak, of Berlin, has been engaged in inquiries upon the above subject, and has arrived at the opinion, that the globules of mucus contained in the menstrual fluid are the sources of that irritation which occasionally gives rise to gonorrhœa in the male urethra. The red colour of the fluid he finds to depend upon blood corpuscules; these are most numerous towards the middle period of its flow. At the commencement and near the close of its appearance, it becomes pale, and is then found to contain a much larger proportion of the scales of epithelium and mucous globules. These mucous globules, he conceives, may, in a morbid state of the mucous membrane which produces them, be so altered in their nature, as to excite a corresponding morbid condition in any other mucous membrane with which they may be brought in contact. Many of our readers will have seen cases in which gonorrhœa has been communicated by a wife wholly free from suspicion; we have seen such cases; and it is highly important in practice to be aware of this tendency on the part of the mucous membrane, at the period of menstruation, to excite such inflammation.

BOOKS RECEIVED.

Practical Observations on Abortion; with plates and woodcuts. By J. S. Streeter. London: Sherwood and Co., 1840, pp. 70.

Rapport sur l'Emploi des eaux minérales de Vichy dans le traitement de la Goutte. Par M. Patissier, suivi d'une reponse, par Charles Petit. Paris, 1840. pp. 240.

The Physiognomy of Mental Diseases. By Sir Alexander Morison, M.D. London. Longman and Co., 1840. Appendix.

TO CORRESPONDENTS.

All further correspondence on the subject of the deafness and treatment of the late Lord William Russell, must be handed to the publisher for appearance among the advertisements. This notice refers also to such letters as we have received during the present week. It is not necessary to explain to their authors the propriety of this decision.

A correspondent writes, "Earl Stanhope, at the late meeting of the British and Foreign Temperance Society, stated that 'the apothecaries of Cambridge kept opium pills for sale and use, amongst persons who bought them instead of intoxicating liquors.' I hope that they can, and will, deny this assertion."

Would Mr. Warner, of Cirencester, be good enough to inform us, of the extent of space, by measurement, between the cul de sac of the pharyngeal œsophagus, and that proceeding from the stomach. His very interesting case of œsophageal arrest of development shall appear next.

A TABLE OF MORTALITY FOR THE METROPOLIS,

Showing the No. of Deaths from all Causes, Registered in the 5 Weeks, ending Saturday, May 30, 1840.

Causes of Death.	Apr. 26 to May 2	May. 3 to 9	10 to 16	17 to 23	24 to 30	Weekly Av. 1838, (corrected.)
Small-Pox	15	13	18	13	13	76
Measles	21	19	17	18	18	12
Scarlatina	33	42	46	35	30	30
Hooping-Cough	26	25	25	11	29	42
Croup	9	7	9	8	6	7
Thrush	9	4	4	3	3	6
Diarrhœa	4	6	2	2	2	8
Dysentery	....	....	1	....	1	2
Cholera	....	....	....	1	1	.3
Influenza	2	....	....	....	3	1
Typhus	25	41	28	25	20	82
Erysipelas	5	5	7	7	4	8
Syphilis	....	....	....	1	....	1
Hydrophobia	....	....	....	....	....	.2
Total	151	162	157	126	135	276
Cephalitis	14	19	13	12	10	11
Hydrocephalus	32	38	37	30	32	35
Apoplexy	12	20	17	17	11	20
Paralysis	23	4	18	13	10	15
Convulsions	41	30	34	43	49	68
Epilepsy	6	6	3	2	5	4
Insanity	....	1	1	3	....	1
Delirium Tremens	1	4	2	1	1	1
Dis. of Brain, &c.	5	6	5	7	11	6
Total	134	148	152	137	138	191
Quinsey	4	....	5	....	....	2
Bronchitis	8	10	8	7	7	9
Pleurisy	1	4	1	1	1	2
Pneumonia	92	66	67	52	69	74
Hydrothorax	5	5	5	3	3	6
Asthma	15	16	17	15	10	29
Consumption	131	148	123	130	147	152
Dis. of Lungs, &c.	10	13	12	12	13	11
Total	266	262	238	220	250	283
Pericarditis	1	....	....	1	1	.3
Aneurism	2	....	....	....	1	.3
Dis. of Heart, &c.	15	12	16	20	19	15
Total	18	12	16	21	21	16
Teething	18	21	17	15	13	15
Gastri.—Enteritis	13	10	20	17	13	18
Peritonitis	3	....	....	1	....	1
Tabes Mesenterica	7	4	5	5	....	3
Ascites	....	....	2	1	2	.3
Ulceration	1	1	1	....	1	1
Hernia	3	1	1	6	1	2
Colic or Ileus	....	3	1	2	1	4
Dis. of Stomach	9	3	10	6	8	4
Hepatitis	1	....	....	1	1	1
Jaundice	1	2	....	....	....	2
Dis. of Liver, &c.	6	4	9	8	11	8
Total	62	49	66	62	51	59
Nephritis	....	....	....	....	....	.5
Diabetes	1	....	2	1	....	.4
Stone	2	....	1	....	1	.4
Stricture	....	....	....	....	....	.6
Dis. Kidneys, &c.	5	3	3	3	6	3
Total	8	3	6	4	7	5

Causes of Death.	Apr. 26 to May 2	May. 3 to 9	10 to 16	17 to 23	24 to 30	Weekly Av. 1838, (corrected.)
Childbed	7	5	4	4	9	8
Ovarian Dropsy	....	....	2	....	1	.3
Dis. of Uterus, &c.	2	....	1	1	2	2
Total	9	5	7	5	12	11
Rheumatism	2	2	3	6	1	4
Dis. of Joints, &c.	1	2	7	6	2	4
Total	3	4	10	12	3	8
Ulcer	....	....	....	....	....	.4
Fistula	....	....	2	1	....	.4
Dis. of Skin, &c.	....	....	1	....	....	.4
Total	....	....	3	1	....	1
Inflammation	8	6	5	7	11	19
Hæmorrhage	5	5	5	4	3	4
Dropsy	29	31	37	25	34	35
Abscess	7	8	8	7	3	4
Mortification	2	8	4	8	6	4
Scrofula	4	3	1	....	2	1
Carcinoma	6	8	12	6	9	6
Tumour	....	2	1	3	1	1
Gout	2	....	1	1	1	1
Atrophy	8	5	3	5	5	4
Debility	17	18	27	21	18	12
Malformations	....	....	2	....	....	1
Sudden Deaths	16	7	15	15	13	13
Total	104	101	120	102	108	105
Old Age	68	58	62	49	54	82
Intemperance	1	1	....	....	....	.4
Privation	....	1	....	....	....	.6
Violent Deaths	25	21	15	17	16	27
Total	26	23	15	17	16	28
Causes not Spec.	4	3	1	....	....	13
Deaths, all Causes	853	830	853	736	795	1031
No. of Week	17	18	19	20	21	....

1840.	Ages. 0 to 15	15 to 60	60 & upwards
April 26th to May 2nd	380	304	168
May 3rd to 9th	367	298	163
„ 10th to 16th	394	295	163
„ 17th to 23rd	344	264	146
„ 24th to 30th	339	287	166
Weekly Average, 1838	484	365	199

	Estimated Pop. 1840.	April 26 to May 2.	May 3 to 9.	May 10 to 16.	May 17 to 23.	May 24 to 30.	Weekly Av. 1838.
West Districts	304,921	140	136	148	114	118	182
North Districts	414,458	165	149	148	151	151	183
Central Districts	309,722	170	167	158	143	148	208
East Districts	411,634	151	155	182	152	189	249
South Districts	450,265	227	223	217	194	191	249
	1,955,000	853	830	853	756	795	1,031